Author Index to Volumes 109, 110, 111, and 112

References with (L) are to Letters to the Editor. References with (E) are to Errata.

Abragam, A. and W. G. Proctor. Spin temperature—109, 1441

Abraham, M., C. D. Jeffries, R. W. Kedzie, and J. C. Wallmann. Re-examination of paramagnetic resonance of Np_I^{239}—112, 553

Abrahams, Elihu (see Weiss, P. R.)—111, 722

Abrikosov, A. A., A. D. Galanin, L. P. Gorkov, L. D. Landau, I. Y. Pomeranchuk, and K. A. Ter-Martirosyan. Possibility of formulation of theory of strongly interacting fermions—111, 321

Adair, Robert K. Production of strange particles by π-nucleon and photonucleon interactions near threshold—111, 632

—— (see Leipuner, L. B.)—109, 1358

Adawi, I. Lorentzian gas and hot electrons—112, 1567

Agarwal, S. P. (see Pomerantz, M. A.)—109, 224(L)

Agnew, L., T. Elioff, W. B. Fowler, L. Gilly, R. Lander, L. Oswald, W. Powell, E. Segrè, H. Steiner, H. White, C. Wiegand, and T. Ypsilantis. $\bar{p}$-p elastic and charge exchange scattering at about 120 Mev—110, 994(L)

Aharoni, A. and S. Shtrikman. Magnetization curve of infinite cylinder—109, 1522

Aitken, M. J. (see Whitehead, C.)—110, 941

Albridge, R. G., J. C. Hubbs, and R. Marrus. Spin of Np^{238}—111, 1137

Alburger, David E. β decay of N^{16}—111, 1586

—— Electric monopole transitions in Ge^{70} and Zr^{90}—109, 1222

——, **S. Ofer, and M. Goldhaber.** Positron spectra of Eu^{152} and Eu^{152m}—112, 1998

—— (see Hatch, E. N.)—110, 1116

—— (see Scharff-Goldhaber, G.)—111, 913; 112, 2139(E)

Alers, G. A. (see Neighbours, J. R.)—111, 707

Alexander, J. M., U. Schindewolf, and Charles D. Coryell. Short-lived isotopes of Pd and Ag of masses 113–117—111, 228

Allen, Robert C. and Nelson Jarmie. Triton reaction cross sections—111, 1129

—— (see Jarmie, Nelson)—111, 1121

Allgaier, Robert S. Magnetoresistance in PbS, PbSe, and PbTe at 295°, 77.4°, and 4.2°K—112, 828

—— **and Wayne W. Scanlon.** Mobility of electrons and holes in PbS, PbSe, and PbTe between room temperature and 4.2°K—111, 1029

Allison, F. E. (see Foner, Simon)—109, 1129

Allison, Samuel K. Double electron capture and loss by He ions traversing gases—109, 76

—— Electron loss cross sections for He atoms in kinetic energy range 100–450 kev—110, 670

Allton, E. A. (see Panofsky, W. K. H.)—110, 1155

Almqvist, E. (see Gove, H. E.)—111, 608

Alsop, L. E. (see Giordmaine, J. A.)—109, 302

Altshuler, Saul. Variational principles for wave function in scattering theory—109, 1830

Alvarez, Luis W., Frank S. Crawford, Jr., and M. Lynn Stevenson. Elastic scattering of 1.6-Mev γ rays from H, Li, C, and Al nuclei—112, 1267

Amado, R. D. Correlations and nuclear magnetic moment—111, 548

Amar, Henri. Magnetization mechanism and domain structure of multidomain particles—111, 149

Amble, E. (see Fletcher, P. C.)—110, 536

Ambler, E., R. W. Hayward, D. D. Hoppes, and R. P. Hudson. β-γ correlations from polarized Mn^{52}—110, 787(L)

Ames, Oakes and George E. Owen. Angular distributions of $B^{11}(d,n)C^{12*}$ first excited state neutrons—109, 1639

Anders, Edward. Neutron activation cross section of Tc^{98}—110, 427

Anderson, G. S., S. Legvold, and F. H. Spedding. Hall effect in Lu, Yb, Tm, and Sm—111, 1257

——, **S. Legvold, and F. H. Spedding.** Superconductivity of La and some La alloys—109, 243

Anderson, Hugh (see Neher, H. V.)—109, 608(L)

Anderson, J. D., C. C. Gardner, J. W. McClure, M. P. Nakada, and C. Wong. Inelastic scattering of 14-Mev neutrons from C and Be—111, 572

——, **C. C. Gardner, M. P. Nakada, and C. Wong.** Back-angle elastic scattering of 14.6-Mev neutrons—110, 160

—— (see Nakada, M. P.)—110, 594(L); 110, 1439

Anderson, James L. Enumeration of true observables in gauge-invariant theories—110, 1197

—— Reduction of primary constraints in generally covariant field theories—111, 965

—— Superpotentials for generally covariant field theory—112, 1826

Anderson, Kinsey A. Soft radiation events at high altitude during magnetic storm of August 29–30, 1957—111, 1397

Anderson, Oscar A., William R. Baker, Stirling A. Colgate, Harold P. Furth, and Robert V. Pyle. Neutron production in linear deuterium pinches—109, 612(L)

——, **William R. Baker, Stirling A. Colgate, John Ise, Jr., and Robert V. Pyle.** Neutron production in linear deuterium pinches—110, 1375

Anderson, P. W. Absence of diffusion in certain random lattices—109, 1492

—— Coherent excited states in theory of superconductivity: gauge invariance and Meissner effect—110, 827

—— New method in theory of superconductivity—110, 985(L)

—— Random phase approximation in theory of superconductors—112, 1900

Antal, J. J. and A. N. Goland. Study of reactor-irradiated α-Al_2O_3—112, 103

Apker, L. (see Taft, E. A.)—110, 876

Appa Rao, M. V. K., S. Biswas, R. R. Daniel, K. A. Neelakantan, and B. Peters. Abundance of light nuclei in primary cosmic radiation—110, 751

Appel, H., H. Schopper, and S. D. Bloom. (β,γ) circular polarization correlation for Co^{60} and Na^{22}—109, 2211(L)

Archer, R. J. Optical constants of Ge: 3600 A to 7000 A—110, 354

Arditi, M. and T. R. Carver. Frequency shift of zero-field hyperfine splitting of Cs^{133} produced by various buffer gases—112, 449

—— **and T. R. Carver.** Optical detection of zero-field hyperfine splitting of Na^{23}—109, 1012(L)

Argyres, Petros N. Quantum theory of galvanomagnetic effects—109, 1115

Armstrong, Alice H. (see Frye, Glenn M., Jr.)—110, 170

Arnoldy, R. (see Winckler, J. R.)—110, 1221

Arns, R. G. and M. L. Wiedenbeck. Analysis of γ-γ angular correlations involving multipole mixtures—111, 1631

—— **and M. L. Wiedenbeck.** Directional correlation of γ rays in Ge^{72}—112, 229

Artman, J. O., N. Bloembergen, and S. Shapiro. Operation of three-level solid state maser at 21 cm—109, 1392(L)

Aruga, Masanao (see Koga, Issac)—109, 1467

Ashby, V. J., H. C. Catron, L. L. Newkirk, and C. J. Taylor. Absolute measurement of $(n,2n)$ cross sections at 14.1 Mev—111, 616

Auer, Peter L. Transient analysis of Townsend discharge—111, 671

——, **H. Hurwitz, Jr., and S. Tamor.** Theory of cathode sheath in low-density gas discharge—111, 1017

Author Index to Volumes 109, 110, 111, and 112

References with (L) are to Letters to the Editor. References with (E) are to Errata.

Abragam, A. and W. G. Proctor. Spin temperature—109, 1441

Abraham, M., C. D. Jeffries, R. W. Kedzie, and J. C. Wallmann. Re-examination of paramagnetic resonance of Np_I^{239}—112, 553

Abrahams, Elihu (see Weiss, P. R.)—111, 722

Abrikosov, A. A., A. D. Galanin, L. P. Gorkov, L. D. Landau, I. Y. Pomeranchuk, and K. A. Ter-Martirosyan. Possibility of formulation of theory of strongly interacting fermions—111, 321

Adair, Robert K. Production of strange particles by π-nucleon and photonucleon interactions near threshold—111, 632

—— (see Leipuner, L. B.)—109, 1358

Adawi, I. Lorentzian gas and hot electrons—112, 1567

Agarwal, S. P. (see Pomerantz, M. A.)—109, 224(L)

Agnew, L., T. Elioff, W. B. Fowler, L. Gilly, R. Lander, L. Oswald, W. Powell, E. Segrè, H. Steiner, H. White, C. Wiegand, and T. Ypsilantis. $\bar{p}$-p elastic and charge exchange scattering at about 120 Mev—110, 994(L)

Aharoni, A. and S. Shtrikman. Magnetization curve of infinite cylinder—109, 1522

Aitken, M. J. (see Whitehead, C.)—110, 941

Albridge, R. G., J. C. Hubbs, and R. Marrus. Spin of Np^{238}—111, 1137

Alburger, David E. β decay of N^{16}—111, 1586

—— Electric monopole transitions in Ge^{70} and Zr^{90}—109, 1222

——, **S. Ofer, and M. Goldhaber.** Positron spectra of Eu^{152} and Eu^{152m}—112, 1998

—— (see Hatch, E. N.)—110, 1116

—— (see Scharff-Goldhaber, G.)—111, 913; 112, 2139(E)

Alers, G. A. (see Neighbours, J. R.)—111, 707

Alexander, J. M., U. Schindewolf, and Charles D. Coryell. Short-lived isotopes of Pd and Ag of masses 113–117—111, 228

Allen, Robert C. and Nelson Jarmie. Triton reaction cross sections—111, 1129

—— (see Jarmie, Nelson)—111, 1121

Allgaier, Robert S. Magnetoresistance in PbS, PbSe, and PbTe at 295°, 77.4°, and 4.2°K—112, 828

—— **and Wayne W. Scanlon.** Mobility of electrons and holes in PbS, PbSe, and PbTe between room temperature and 4.2°K—111, 1029

Allison, F. E. (see Foner, Simon)—109, 1129

Allison, Samuel K. Double electron capture and loss by He ions traversing gases—109, 76

—— Electron loss cross sections for He atoms in kinetic energy range 100–450 kev—110, 670

Allton, E. A. (see Panofsky, W. K. H.)—110, 1155

Almqvist, E. (see Gove, H. E.)—111, 608

Alsop, L. E. (see Giordmaine, J. A.)—109, 302

Altshuler, Saul. Variational principles for wave function in scattering theory—109, 1830

Alvarez, Luis W., Frank S. Crawford, Jr., and M. Lynn Stevenson. Elastic scattering of 1.6-Mev γ rays from H, Li, C, and Al nuclei—112, 1267

Amado, R. D. Correlations and nuclear magnetic moment—111, 548

Amar, Henri. Magnetization mechanism and domain structure of multidomain particles—111, 149

Amble, E. (see Fletcher, P. C.)—110, 536

Ambler, E., R. W. Hayward, D. D. Hoppes, and R. P. Hudson. β-γ correlations from polarized Mn^{52}—110, 787(L)

Ames, Oakes and George E. Owen. Angular distributions of $B^{11}(d,n)C^{12*}$ first excited state neutrons—109, 1639

Anders, Edward. Neutron activation cross section of Tc^{98}—110, 427

Anderson, G. S., S. Legvold, and F. H. Spedding. Hall effect in Lu, Yb, Tm, and Sm—111, 1257

——, **S. Legvold, and F. H. Spedding.** Superconductivity of La and some La alloys—109, 243

Anderson, Hugh (see Neher, H. V.)—109, 608(L)

Anderson, J. D., C. C. Gardner, J. W. McClure, M. P. Nakada, and C. Wong. Inelastic scattering of 14-Mev neutrons from C and Be—111, 572

——, **C. C. Gardner, M. P. Nakada, and C. Wong.** Back-angle elastic scattering of 14.6-Mev neutrons—110, 160

—— (see Nakada, M. P.)—110, 594(L); 110, 1439

Anderson, James L. Enumeration of true observables in gauge-invariant theories—110, 1197

—— Reduction of primary constraints in generally covariant field theories—111, 965

—— Superpotentials for generally covariant field theory—112, 1826

Anderson, Kinsey A. Soft radiation events at high altitude during magnetic storm of August 29–30, 1957—111, 1397

Anderson, Oscar A., William R. Baker, Stirling A. Colgate, Harold P. Furth, and Robert V. Pyle. Neutron production in linear deuterium pinches—109, 612(L)

——, **William R. Baker, Stirling A. Colgate, John Ise, Jr., and Robert V. Pyle.** Neutron production in linear deuterium pinches—110, 1375

Anderson, P. W. Absence of diffusion in certain random lattices—109, 1492

—— Coherent excited states in theory of superconductivity: gauge invariance and Meissner effect—110, 827

—— New method in theory of superconductivity—110, 985(L)

—— Random phase approximation in theory of superconductors—112, 1900

Antal, J. J. and A. N. Goland. Study of reactor-irradiated α-Al_2O_3—112, 103

Apker, L. (see Taft, E. A.)—110, 876

Appa Rao, M. V. K., S. Biswas, R. R. Daniel, K. A. Neelakantan, and B. Peters. Abundance of light nuclei in primary cosmic radiation—110, 751

Appel, H., H. Schopper, and S. D. Bloom. (β,γ) circular polarization correlation for Co^{60} and Na^{22}—109, 2211(L)

Archer, R. J. Optical constants of Ge: 3600 A to 7000 A—110, 354

Arditi, M. and T. R. Carver. Frequency shift of zero-field hyperfine splitting of Cs^{133} produced by various buffer gases—112, 449

—— **and T. R. Carver.** Optical detection of zero-field hyperfine splitting of Na^{23}—109, 1012(L)

Argyres, Petros N. Quantum theory of galvanomagnetic effects—109, 1115

Armstrong, Alice H. (see Frye, Glenn M., Jr.)—110, 170

Arnoldy, R. (see Winckler, J. R.)—110, 1221

Arns, R. G. and M. L. Wiedenbeck. Analysis of γ-γ angular correlations involving multipole mixtures—111, 1631

—— **and M. L. Wiedenbeck.** Directional correlation of γ rays in Ge^{72}—112, 229

Artman, J. O., N. Bloembergen, and S. Shapiro. Operation of three-level solid state maser at 21 cm—109, 1392(L)

Aruga, Masanao (see Koga, Issac)—109, 1467

Ashby, V. J., H. C. Catron, L. L. Newkirk, and C. J. Taylor. Absolute measurement of $(n,2n)$ cross sections at 14.1 Mev—111, 616

Auer, Peter L. Transient analysis of Townsend discharge—111, 671

——, **H. Hurwitz, Jr., and S. Tamor.** Theory of cathode sheath in low-density gas discharge—111, 1017

Aull, L. B. and W. D. Whitehead. Cross section for $Al^{27}(\gamma,2p)Na^{25}$ reaction to 65 Mev—**110**, 1113
Austern, N. and S. T. Butler. Refraction effects in direct nuclear reactions—**109**, 1402(L)
—— (see Butler, S. T.)—**112**, 1227
Autler, S. H. and Nelson McAvoy. 21-centimeter solid-state maser—**110**, 280(L)
Ayres, R. U. Variational approach to many-body problem—**111**, 1453

Babcock, Horace. Stars as sources of cosmic rays—**109**, 2210(L)
Bade, William L. (see Jehle, Herbert)—**110**, 793
Bailyn, M. Transport in metals: effect of the nonequilibrium phonons—**112**, 1587
Bair, J. K. (see Wills, J. E., Jr.)—**109**, 891
Baker, E., G. Friedlander, and J. Hudis. Formation of Be^7 in interactions of various nuclei with high-energy protons—**112**, 1319
Baker, George A., Jr. Formulation of quantum mechanics based on quasi-probability distribution induced on phase space—**109**, 2198
—— Structure of nuclear mass surface—**112**, 954
Baker, J. G. Energy levels of asymmetric rotor—**110**, 282(L)
Baker, J. M. (see Quinn, W. E.)—**112**, 1929
Baker, W. F., H. Byfield, and J. Rainwater. Theoretical calculations of scattering of π^- mesons by complex nuclei—**112**, 1773
——, **J. Rainwater, and R. E. Williams.** Scattering of 80-Mev π^- mesons by complex nuclei—**112**, 1763
Baker, William R. (see Anderson, Oscar A.)—**109**, 612(L); **110**, 1375
Balazs, Nandor L. Brownian motion of mirror in superfluid He—**109**, 232
—— Effect of gravitational field, due to rotating body, on plane of polarization of electromagnetic wave—**110**, 236
Baldo-Ceolin, M., H. Huzita, S. Natali, U. Camerini, and W. F. Fry. Hyperfragments produced by K^0 mesons from K^+ charge exchange—**112**, 2118
Baldwin, Barbara B. (see Green, Louis C.)—**112**, 1187
Balkanski, M. and R. D. Waldron. Internal photoeffect and exciton diffusion in Cd and Zn sulfides—**112**, 123
Ball, James S. and Geoffrey F. Chew. Nucleon-antinucleon interaction at intermediate energies—**109**, 1385
Ball, William P., Malcolm MacGregor, and Rex Booth. Neutron nonelastic cross sections from 7 to 14 Mev—**110**, 1392
—— (see Booth, Rex)—**112**, 226
—— (see MacGregor, Malcolm H.)—**111**, 1155
Balluffi, R. W. (see Simmons, R. O.)—**109**, 1142
Bandtel, Kenneth C., Wilson J. Frank, and Richard Madey. Measurement of spin-flip probability in photoproduction of negative pions from deuterium—**109**, 2117
——, **Wilson J. Frank, and Burton J. Moyer.** Comparison of reactions $p+d\rightarrow H^3+\pi^+$, $p+d\rightarrow He^3+\pi^0$ as test of charge independence—**110**, 1484(E)
Banerjee, Haridas. Polarization effects in integrated bremsstrahlung cross section—**111**, 532
Banewicz, John J. (see Lindsay, Robert)—**110**, 634
Baranger, Michel. General impact theory of pressure broadening—**112**, 855
—— Problem of overlapping lines in theory of pressure broadening—**111**, 494
—— Simplified quantum mechanical theory of pressure broadening—**111**, 481
Baranov, P. S., V. I. Gol'danskii, and V. S. Roganov. Yield and angular distribution of fast photoneutrons from D and C—**109**, 1801
Barber, W. C. Electrodisintegration of Be^9 and C^{12}—**111**, 1642
Barcus, L. C., A. Perlmutter, and J. Callaway. Effective mass of electrons in GaAs—**111**, 167
Bardeen, J. (see Mattis, D. C.)—**111**, 412
Bardon, M., M. Fuchs, K. Lande, L. M. Lederman, W. Chinowsky, and J. Tinlot. Lifetime and decay of K_2^0 meson—**110**, 780(L)
Barkas, Walter H., John N. Dyer, Peter C. Giles, Harry H. Heckman, Conrad J. Mason, Norris A. Nickols, and Frances M. Smith. Negative K-meson reactions with protons: masses of charged Σ hyperons and negative K meson—**112**, 622
Barker, F. C. (see Tassie, L. J.)—**111**, 940
Barnes, C. A. (see Kavanagh, R. W.)—**112**, 503
Barnett, C. F. and H. K. Reynolds. Charge exchange cross sections of H particles in gases at high energies—**109**, 355
—— **and P. M. Stier.** Charge exchange cross sections for He ions in gases—**109**, 385
Baroody, E. M. Influence of mass ratio on displacement cascades in diatomic solids—**112**, 1571
Barrett, A. H. and M. Mandel. Microwave spectra of Tl, In, and Ga monohalides—**109**, 1572
Barrett, C. S. Structure of Tl and Gd at low temperatures—**110**, 1071
Barshay, Saul. Possible model for strong interactions—**109**, 2160
—— Remarks on pion production in pion-nucleon collisions at moderate energies—**111**, 1651
—— Scattering of K^+ mesons by nucleons—**110**, 743
—— Selection rules for pion production in nucleon-antinucleon scattering—**109**, 554
Barton, M. Q. and J. H. Smith. Correlated neutron-proton pairs from high-energy photodisintegration of He and Li—**110**, 1143
Barut, A. O. Covariant quantum statistics of fields—**109**, 1376
Bashkin, S., R. R. Carlson, R. A. Douglas, and J. A. Jacobs. Response of CsI(Tl) crystals to energetic particles—**109**, 434
Bauminger, E. R. and S. G. Cohen. Natural radioactivity of V^{50} and Ta^{180}—**110**, 953
Bayer, Raymond (see Truell, Rohn)—**110**, 1206(L)
Beaty, E. C., P. L. Bender, and A. R. Chi. Narrow hyperfine absorption lines for Cs^{133} in various buffer gases—**112**, 450
Bechmann, R. Elastic and piezoelectric constants of α-quartz—**110**, 1060
Beck, Paul A. (see Wei, Chuan-Tseng)—**112**, 696
Becker, R. A. (see Gove, N. B.)—**112**, 489
Beckman, Olof. K x-ray spectrum of Hg—**109**, 1590
Bedo, D. E. and D. H. Tomboulian. K emission spectrum of metallic Li—**109**, 35
Beer, A. C. and R. K. Willardson. Hall and transverse magnetoresistance effects for warped bands and mixed scattering—**110**, 1286
Bég, Mirza A. Baqi. Existence of positronium in solids—**111**, 1062
Beghian, L. E., R. P. Scharenberg, P. H. Rose, and R. W. Waniek. Possible method of investigating gyromagnetic ratios of short-lived nuclear states with fast neutral beams—**110**, 1479(L)
Behrends, R. E. Universal Fermi interaction—**109**, 2217(L)
—— Photon decay of hyperons—**111**, 1691
Behrendt, D. R., S. Legvold, and F. H. Spedding. Magnetic properties of Dy single crystals—**109**, 1544
Beitel, Frank P., Jr., and Emerson M. Pugh. Two Hall effects of Fe-Co alloys—**112**, 1516
Bekefi, G. and Sanborn C. Brown. Collision cross section and energy loss of slow electrons in H_2—**112**, 159
Bell, M. Drake and William J. Leivo. Rectification, photoconductivity, and photovoltaic effect in semiconducting diamond—**111**, 1227
Bell, William E. and Arnold L. Bloom. Optically detected field-independent transition in Na vapor—**109**, 219(L)

Bemski, G. Recombination properties of Au in Si—**111**, 1515
Bendel, Warren L., John McElhinney, and Ralph A. Tobin. Photoneutron reactions in N, O, F, Cu, Ag, and In—**111**, 1297
Bender, P. L. (see Beaty, E. C.)—**112**, 450
Bendt, Philip J. Measurements of He^3-He^4 and H_2-D_2 gas diffusion coefficients—**110**, 85
Benedict, T. S. and J. L. Durand. Dielectric properties of single domain crystals of $BaTiO_3$ at microwave frequencies—**109**, 1091
Bennett, Lawrence H. and H. C. Torrey. High negative nuclear polarizations in liquid—**109**, 2218(E)
Benson, Jay L. (see Giese, Clayton F.)—**110**, 712
Bent, R. D. and T. H. Kruse. Compound states formed in reaction $Ca^{40}(p,p'e^+e^-)$—**109**, 1240
—— (see Eklund, K. E.)—**112**, 488; **112**, 966
—— (see Kruse, T. H.)—**112**, 931
Berestetsky, V. B., B. L. Ioffe, A. P. Rudik, and K. A. Ter-Martirosyan. Effects related to nonconservation of parity in β decay—**111**, 522
Berg, R. A. and C. N. Lindner. High-energy bremsstrahlung in electron-proton collisions—**112**, 2072
Bergmann, Peter G. Conservation laws in general relativity as generators of coordinate transformations—**112**, 287
—— **and Allen, I. Janis.** Subsidiary conditions in covariant theories—**111**, 1191
—— (see Sachs, R.)—**112**, 674
Berko, Stephan and John S. Plaskett. Correlation of annihilation radiation in oriented single metal crystals—**112**, 1877
Berley, David and George B. Collins. Cross sections for associated production by protons—**112**, 614
Berlincourt, Don and Hans Jaffe. Elastic and piezoelectric coefficients of single-crystal $BaTiO_3$—**111**, 143
Berlincourt, Ted G. Hall effect, magnetoresistance, and size effects in Cu—**112**, 381
Berman, A., M. W. Zemansky, and H. A. Boorse. Normal and superconducting heat capacities of La—**109**, 70
Berman, S. M. Radiative corrections to muon and neutron decay—**112**, 267
Bernardes, Newton. Theory of solid Ne, A, Kr, and Xe at 0°K—**112**, 1534
Bernstein, A. M. and A. K. Mann. Scattering of γ rays by static electric field—**110**, 805
Bernstein, E. M. Internal conversion electrons from Coulomb excitation of Ta^{181}—**112**, 2026
Bernstein, Ira B. Waves in plasma in magnetic field—**109**, 10
—— (see Lenard, A.)—**112**, 1456
Bernstein, Jeremy and Kenneth A. Johnson. Decay of neutral π meson—**109**, 189
——, **T. D. Lee, C. N. Yang, and H. Primakoff.** Effect of hyperfine splitting of μ-mesonic atom on its lifetime—**111**, 313
—— **and Robert R. Lewis.** Vector interaction in β decay—**112**, 232
Berreman, Dwight W. Possible explanation for mosaic-like Bragg reflection in quartz under strain—**110**, 992(L)
Bertozzi, W., F. R. Paolini, and C. P. Sargent. Time-of-flight measurement of photoneutron energy spectra—**110**, 790(L)
Bess, Leon. Radiationless recombination in phosphors—**111**, 129
Bichsel, Hans. Experimental range of protons in Al—**112**, 1089
—— Multiple scattering of protons—**112**, 182
Biedenharn, L. C. (see Prosser, F. W., Jr.)—**109**, 413
Bincer, Adam M. Nuclear spin-electron-neutrino correlation in forbidden β decay—**112**, 244
Bingham, H. H. and A. B. Clegg. Photoproduction of neutral pions from H in energy range 700–1100 Mev—**112**, 2053
Biondi, Manfred A. Dissociative attachment of electrons in I_2. I. Microwave determination of absolute cross section at 300°K—**109**, 2005
—— **and R. E. Fox.** Dissociative attachment of electrons in I_2. III. Discussion—**109**, 2012
Birman, Joseph L. Electronic energy bands in ZnS: potential in Zn blende and wurtzite—**109**, 810
—— Theory of piezoelectric effect in Zn blende structure—**111**, 1510
—— (see Shakin, Carl)—**109**, 818
Biswas, S. (see Appa Rao, M. V. K.)—**110**, 751
Bitter, Francis (see Sagalyn, Paul L.)—**109**, 375
Bivins, R. (see Dostrovsky, I.)—**111**, 1659
—— (see Metropolis, N.)—**110**, 185; **110**, 204
Bjorken, J. D., S. D. Drell, and S. C. Frautschi. Wide-angle pair production and quantum electrodynamics at small distances—**112**, 1409
Bjorklund, F. and S. Fernbach. Optical model analyses of scattering of 4.1-, 7-, and 14-Mev neutrons—**109**, 1295
Blair, J. M. (see Hill, H. A.)—**111**, 1142
Blair, J. S. and E. M. Henley. Inelastic scattering from light nuclei—the α-particle model for Be^9—**112**, 2029
Blakemore, J. S. Lifetime in p-type Si—**110**, 1301
—— (see Nomura, K. C.)—**112**, 1607
Blankenbecler, R. Improved sum rule for electron-deuteron scattering—**111**, 1684
Bleil, C. E., D. D. Snyder, and Y. T. Sihvonen. Bombardment of CdS crystals with 30- to 60-kev electrons—**111**, 1522
Bleuler, E. (see Gailar, O. H.)—**112**, 1989
—— (see Seidlitz, L.)—**110**, 682
Blevins, M. E., M. M. Block, and J. Leitner. π^+-p interactions in energy range around 500 Mev—**112**, 1287
Bloch, F. Theory of line narrowing by double-frequency irradiation—**111**, 841
Block, M. M. (see Blevins, M. E.)—**112**, 1287
—— (see Slaughter, G. G.)—**109**, 2111
—— (see Whitten, R. C.)—**111**, 1676
Block, Robert C. Angular distribution of neutrons scattered by 2.80-kev resonance in Na—**109**, 1217
——, **Willy Haeberli, and Henry W. Newson.** Neutron resonance in kev region: differential scattering cross sections—**109**, 1620
Bloembergen, N. Electron spin and phonon equilibrium in masers—**109**, 2209(L)
—— **and P. P. Sorokin.** Nuclear magnetic resonance in Cs halides—**110**, 865
—— (see Artman, J. O.)—**109**, 1392(L)
Bloom, Arnold L. (see Bell, William E.)—**109**, 219(L)
Bloom, S. D. (see Appel, H.)—**109**, 2211(L)
Blosser, H. G., C. D. Goodman, and T. H. Hadley. Measurements of (n,α) cross sections at 14 Mev—**110**, 531
Bludman, Sidney and Abraham Klein. Phenomenological analysis of μ decay—**109**, 550
Blumberg, Sydel and Charles E. Porter. Nuclear fine structure widths and spacings—**110**, 786(L)
Blumberg, W. E. and T. P. Das. Hyperfine interactions in F centers—**110**, 647
Blume, Richard J. Electron spin relaxation times in sodium-ammonia solutions—**109**, 1867
Bocchieri, P. and A. Loinger. Ergodic theorem in quantum mechanics—**111**, 668
Boehm, F. Interference between Gamow-Teller and Fermi interaction in Mn^{52}—**109**, 1018(L)
—— **and A. H. Wapstra.** β-γ circular polarization correlation experiments—**109**, 456
Bohm, David and Jean-Pierre Vigier. Relativistic hydrodynamics of rotating fluid masses—**109**, 1882
Bohm, H. V. (see Morse, R. W.)—**109**, 1394(L)
Bohr, A., B. R. Mottelson, and D. Pines. Possible analogy between excitation spectra of nuclei and those of superconducting metallic state—**110**, 936
Boldt, Elihu, Herbert S. Bridge, David O. Caldwell, and Yash Pal. Neutral decay modes of θ_1^0 and Λ^0—**112**, 1746

Bolef, D. I. (see Menes, M.)—109, 218(L)
Boley, F. I., E. H. Thorndike, and A. T. Moffet. Nuclear levels excited by inelastic neutron scattering—110, 915
Bollinger, L. M. (see Coté, Robert E.)—111, 288
—— (see Saplakoglu, A.)—109, 1258
Bondelid, R. O. (see Dunning, K. L.)—110, 1076
Bonner, T. W. (see Ranken, W. A.)—109, 917; 109, 1646; 112, 239
Boorse, H. A. (see Berman, A.)—109, 70
Booth, Rex, William P. Ball, and Malcolm H. MacGregor. Neutron activation cross section at 25 kev—112, 226
—— (see Ball, William P.)—110, 1392
—— (see MacGregor, Malcolm H.)—111, 1155; 112, 486
Boreli, F. and S. E. Darden. Strength function determinations using fast neutrons—109, 2079
Bosch, H., R. Radicella, P. Reyes, and T. Urstein. γ rays from I^{128}—111, 898
Bouchiat, Claude C. Recoil effect in β decay and K capture—112, 877
Bowcock, J. E. First excited state of B^{11} and spin-flip stripping—112, 923
Bowers, V. A. (see Jen, C. K.)—112, 1169
Boyd, G. D., L. M. Field, and R. W. Gould. Excitation of plasma oscillations and growing plasma waves—109, 1393(L)
Boyle, W. S., A. D. Brailsford, and J. K. Galt. Dielectric and cyclotron absorption in infrared: observations on Bi—109, 1396(L)
—— **and P. Nozières.** Band structure and infrared absorption of graphite—111, 782
Bozorth, R. M. and J. W. Nielsen. Antiferromagnetism of $CuF_2 \cdot 2H_2O$ and MnF_2—110, 879
—— (see Matthias, B. T.)—109, 604(L)
Brackmann, R. T., Wade L. Fite, and Roy H. Neynaber. Collisions of electrons with H atoms. III. Elastic scattering—112, 1157
—— (see Fite, Wade L.)—112, 1141; 112, 1151; 112, 1161
Brailsford, A. D. (see Boyle, W. S.)—109, 1396(L)
Brandt, Werner. Energy loss of charged particles in LiH—111, 1042
—— Tight-binding corrections of stopping powers—112, 1624
Branscomb, Lewis M., David S. Burch, Stephen J. Smith, and Sydney Geltman. Photodetachment cross section and electron affinity of atomic O—111, 504
—— (see Burch, D. S.)—112, 171
Bratenahl, A., J. M. Peterson, and J. P. Stoering. Neutron total cross section in 7- to 14-Mev region—110, 927
Braunstein, Rubin and L. Magid. Optical absorption in p-type GaAs—111, 480
——, **Arnold R. Moore, and Frank Herman.** Intrinsic optical absorption in Ge-Si alloys—109, 695
Bray, P. J. (see Hon, John F.)—110, 624
—— (see Kim, Y. W.)—111, 1468
Breene, R. G., Jr. Analytic wave functions. I. Atoms with $1s$, $2s$, and $2p$ electrons—111, 1111
Breit, G. Velocity-dependent features of static nucleon-nucleon potential—111, 652
Bremermann, H. J., R. Oehme, and J. G. Taylor. A proof of dispersion relations in quantized field theories—109, 2178
Brennan, James G. Extrapolation procedure for low-energy deuteron-deuteron reaction cross section—111, 1592
—— (see Pinkston, William T.)—109, 499
Brewer, D. F., A. K. Sreedhar, H. C. Kramers, and J. G. Daunt. Specific heat of He^3 below 1°K—110, 282(L)
Brice, M. K. (see Cork, J. M.)—110, 526
Bridge, Herbert S. (see Boldt, Elihu)—112, 1746
Briggs, G. R. (see Nilson, R.)—109, 850
Brill, Patricia H. and Ruth F. Schwarz. Radiative recombination in Ge—112, 330
Briscoe, C. V. and C. F. Squire. Spin-lattice relaxation time for I^{127} in KI—112, 1540
—— (see Norwood, M. H.)—112, 45
Brock, R. L. and J. F. Streib. Attempt to detect Lyman α-line of positronium atomic spectrum—109, 399
Brockhouse, B. N. Field dependence of neutron scattering by spin waves—111, 1273
—— **and P. K. Iyengar.** Normal modes of Ge by neutron spectrometry—111, 747
Brockman, Karl W., Jr. Proton polarization measurements near 18 Mev—110, 163
Brody, H. M., A. M. Wetherell, and R. L. Walker. Photoproduction of K^+ particles in hydrogen at forward angles—110, 1213(L)
Brolley, J. E., Jr., W. S. Hall, L. Rosen, and L. Stewart. Experimental evidence for reaction $d+T \rightarrow He^3+n+n-3$ Mev—109, 1277
Bromley, D. A. (see Gove, H. E.)—111, 608
Bron, W. E. and A. S. Nowick. Effect of fractional x-irradiation of NaCl crystals on F-center density—111, 26
Brooks, Harvey and Frank S. Ham. Energy bands in solids—quantum defect method—112, 344
Brophy, James J. Seebeck effect fluctuations in Ge—111, 1050
Brout, R. Variational methods and nuclear many-body problem—111, 1324
—— **and M. Nauenberg.** Quantum theory of surface energy and tension—112, 1451
Brown, E. and J. A. Krumhansl. Energy band structure of Li by modified plane wave method—109, 30
Brown, Frederick C. (see Van Heyningen, R. S.)—111, 462
Brown, G. E. p-p scattering in Bev region—111, 1178
Brown, L. Carlton (see Geusic, J. E.)—112, 64
Brown, Laurie M. Two-component fermion theory—111, 957
Brown, Louis (see Hatcher, Charles R.)—111, 12
Brown, Sanborn C. (see Bekefi, G.)—112, 159
Brueckner, Keith A. Single-particle energy and effective mass and binding energy of many-body systems—110, 597
—— **and J. L. Gammel.** Properties of liquid He^3 at low temperature—109, 1040
—— **and J. L. Gammel.** Properties of nuclear matter—109, 1023
——, **J. L. Gammel, and H. Weitzner.** Theory of finite nuclei—110, 431
—— **and K. Sawada.** Magnetic susceptibility of electron gas at high density—112, 328
—— (see Klein, Milton M.)—111, 1115
Brunhart, G., V. P. Kenney, and B. D. Kern. β-ray spectrum of N^{16}—110, 924
Brussel, Morton K. (see Fox, J. D.)—110, 1472(L)
—— (see Williams, John H.)—110, 136
Bube, Richard H. and Edward L. Lind. Photoconductivity of ZnSe crystals and correlation of donor and acceptor levels in II–VI photoconductors—110, 1040
Buechner, W. W. (see de Figueiredo, R. P.)—112, 873
—— (see Mazari, M.)—112, 1692
—— (see Sharp, R. D.)—109, 1698; 112, 897
—— (see Sperduto, A.)—109, 462
Buehler, E. (see Feher, G.)—109, 221(L)
Bullis, W. Murray. Galvanomagnetic effects in oriented single crystals of n-type Ge—109, 292
Bullough, R. Birefringence caused by edge dislocations in Si—110, 620
Bundy, F. P. Phase diagram of Bi to 130 000 kg/cm², 500°C—110, 314
Buneman, O. Transverse plasma waves and plasma vortices—112, 1504
Bunker, M. E. (see Cranston, F. P., Jr.)—110, 1427
Burch, David S., S. J. Smith, and L. M. Branscomb. Photodetachment of O_2^-—112, 171
—— (see Branscomb, Lewis M.)—111, 504

Burgy, M. T., V. E. Krohn, T. B. Novey, G. R. Ringo, and V. L. Telegdi. Measurements of asymmetries in decay of polarized neutrons—**110**, 1214(L)
Burk, D. L. and S. A. Friedberg. Atomic heat of diamond from 11° to 200°K—**111**, 1275
Burleson, George R. and R. Hofstadter. High-energy electron scattering from Li^6—**112**, 1282
—— (see McIntyre, John A.)—**112**, 2077
Burrus, C. A. and J. D. Graybeal. Stark effect at 2.0 and 1.2 mm wavelength: NO—**109**, 1553
Butcher, J. C. and H. Messel. Electron number distribution in electron-photon showers—**112**, 2096
Butler, J. W. and C. R. Gossett. Decay of Cu^{62}—**112**, 1257
—— **and C. R. Gossett.** Positron decay of Cu^{59} and Cu^{61} and energy levels in Ni^{59} and Ni^{61}—**109**, 863; **110**, 863(E)
—— **and H. D. Holmgren.** γ-ray threshold method and $O^{18}(d,n\gamma)F^{19}$ reaction—**112**, 461
—— (see Dunning, K. L.)—**110**, 1076
Butler, S. T., N. Austern, and C. Pearson. Semiclassical treatment of direct nuclear reactions—**112**, 1227
—— (see Austern, N.)—**109**, 1402(L)
Byers, Don H. and Robert Stump. Low-temperature influence on Tc^{99m} lifetime—**112**, 77
Byfield, H. (see Baker, W. F.)—**112**, 1773

Caldwell, David O. (see Boldt, Elihu)—**112**, 1746
Callaway, Joseph. Electron energy bands in Na—**112**, 322
—— Electron wave functions in metallic Cs—**112**, 1061
—— Klein-Gordon and Dirac equations in general relativity—**112**, 290
—— **and M. L. Glasser.** Fourier coefficients of crystal potentials—**112**, 73
—— **and Daniel F. Morgan, Jr.** Cohesive energy and wave functions for Rb—**112**, 334
—— (see Barcus, L. C.)—**111**, 167
—— (see Glasser, M. L.)—**109**, 1541
Callen, Herbert B. Path distribution for irreversible processes—**111**, 367
—— (see Ufford, C. W.)—**110**, 1352
Camerini, U. (see Baldo-Ceolin, M.)—**112**, 2118
Capps, Richard H. Form of scattering amplitude for two systems of arbitrary spins—**109**, 1823
Caretto, A. A. and G. Friedlander. (p,pn) and $(p,2p)$ reactions of Ce^{142} at proton energies from 0.4 to 3.0 Bev—**110**, 1169
——, **J. Hudis, and G. Friedlander.** Production of F^{18} and Na^{24} in irradiations of various targets with protons between 1 and 6 Bev—**110**, 1130
—— (see Nethaway, D. R.)—**109**, 504
Carleton, N. P. and T. R. Lawrence. Absolute cross sections for excitation of N_2 by protons of few kev energy—**109**, 1159
Carlson, R. O. Electrical properties of HgTe—**111**, 476
Carlson, R. R. (see Bashkin, S.)—**109**, 434
Carr, H. Y. Steady-state free precession in nuclear magnetic resonance—**112**, 1694
—— (see Simpson, J. H.)—**111**, 1201
Carr, W. J., Jr. Temperature dependence of ferromagnetic anisotropy—**109**, 1971
Carver, T. R. (see Arditi, M.)—**109**, 1012(L); **112**, 449
Casella, Russell C. Energy-band structure of hypothetical C metal—**109**, 54
Castagnoli, C. and M. Muchnik. Experimental results on radiative π-μ decay—**112**, 1779
Castillo-Bahena, R. (see Ranken, W. A.)—**112**, 239
Castle, J. G., Jr. (see Chester, P. F.)—**110**, 281(L)
Catron, H. C. (see Ashby, V. J.)—**111**, 616
Chase, David M. Semiclassical limit for excitation of rotational motion by scattering—**110**, 673
——, **L. Wilets, and A. R. Edmonds.** Rotational-optical model for scattering of neutrons—**110**, 1080
Chase, L. F., Jr. (see Meyerhof, W. E.)—**111**, 1348
Chasman, R. R. and J. O. Rasmussen. α decay of deformed even-even nuclei—**112**, 512
Cheever, G. D., W. S. Koski, D. R. Tilley, and Leon Madansky. Decay of Te^{122}—**110**, 922
Cheng, Chin-Huan (see Wei, Chuan-Tseng)—**112**, 696
Cheroff, George and Seymour P. Keller. Optical transmission and photoconductive and photovoltaic effects in activated and unactivated single crystals of ZnS—**111**, 98
Chesick, Elizabeth B. and J. Schneps. Production of Auger electrons by negative K-mesons and π-mesons—**112**, 1810
Chesnut, W. G. (see Panofsky, W. K. H.)—**109**, 1353
Chester, P. F., P. E. Wagner, and J. G. Castle, Jr. Two-level solid-state maser—**110**, 281(L)
Cheston, W. B. (see Erickson, G. W.)—**111**, 891
Chew, Geoffrey F. Proposal for determining pion-nucleon coupling constant from angular distribution for nucleon-nucleon scattering—**112**, 1380
——, **Robert Karplus, Stephen Gasiorowicz, and Fredrik Zachariasen.** Electromagnetic structure of nucleon in local-field theory—**110**, 265
—— **and H. Pierre Noyes.** Dispersion relations for scattering in presence of Coulomb field—**109**, 566
—— (see Ball, James S.)—**109**, 1385
Chi, A. R. (see Beaty, E. C.)—**112**, 450
Chiarotti, Gianfranco and Nicolas Inchauspé. Photoproduction of V_1 centers in KBr crystals—**109**, 345
Chiba, Ren (see Herring, D. F.)—**112**, 1210
Child, H. R. (see Wollan, E. O.)—**112**, 1132
Chinowsky, W. (see Bardon, M.)—**110**, 780(L)
Chirba, V. G. (see Gibbons, D. F.)—**110**, 770(L)
Chiu, Hong-Yee. Mass effect in P-state π-p scattering—**111**, 1170
—— π^--p scattering and dispersion relations—**110**, 1140
Chou, Chien, David White, and H. L. Johnston. Heat capacity in normal and superconducting states and critical field of Nb—**109**, 788
—— (see White, David)—**109**, 797
Chrien, R. E. (see Fox, J. D.)—**110**, 1472(L)
Christensen, R. L. (see Reynolds, J. B.)—**109**, 465
Christy, R. W. and W. E. Harte. Electrical conductivity of x-irradiated NaCl—**109**, 710
Chupp, E. L., J. W. M. DuMond, F. J. Gordon, R. C. Jopson, and Hans Mark. K series x-ray wavelengths in rare earth elements—**112**, 1183
——, **J. W. M. DuMond, F. J. Gordon, R. C. Jopson, and Hans Mark.** Precision determination of γ rays following $(p,p'\gamma)$ and $(p,n\gamma)$ reactions—**112**, 532
——, **J. W. M. DuMond, F. J. Gordon, R. C. Jopson, and Hans Mark.** Precision determination of nuclear energy levels in heavy elements—**112**, 518
——, **J. W. M. DuMond, F. J. Gordon, R. C. Jopson, and Hans Mark.** Precision determination of some energy levels in Fe^{57}, Zn^{67}, and Tc^{99}—**109**, 2036
Chupp, Warren W. (see Igo, George)—**109**, 2133
—— (see Lannutti, Joseph E.)—**109**, 2121
Church, E. L., M. E. Rose, and J. Weneser. Electric monopole directional correlation experiments—**109**, 1299
Chynoweth, A. G. Barkhausen pulses in $BaTiO_3$—**110**, 1316
—— Ionization rates for electrons and holes in Si—**109**, 1537
Ćirilov, Silva D. (see Jurić, Mira K.)—**112**, 1224
Clark, Clifton Bob. Coulomb interactions in uniform-background lattice model—**109**, 1133
Clark, G. Wayne (see Tiller, Calvin O.)—**110**, 583(L)
Clark, George W. and Juan Hersil. Polarization of cosmic-ray μ mesons: experiment—**110**, 1485(E)
Clegg, A. B. (see Bingham, H. H.)—**112**, 2053
Cloud, W. H. Crystal structure and ferrimagnetism in $NiMnO_3$ and $CoMnO_3$—**111**, 1046

Cocconi, Giuseppe. Empirical model for ultrarelativistic nucleon-nucleon collisions—**111**, 1699
—— (see Sellen, J. M.)—**110**, 779(L)
Cocconi, V. T. (see Sellen, J. M.)—**110**, 779(L)
Cochran, E. L. (see Jen, C. K.)—**112**, 1169
Cochran, John F. and D. E. Mapother. Superconducting transition in Al—**111**, 132
Cochran, R. G. and W. W. Pratt. Radioactive decay of Se^{83}—**109**, 878
Cody, G. D. Volume changes associated with superconducting transition—**111**, 1078
Coffin, C. T. and I. Halpern. Angular distributions in fission induced by α particles, deuterons, and protons—**112**, 536
Coffin, T., R. L. Garwin, S. Penman, L. M. Lederman, and A. M. Sachs. Magnetic moment of free muon—**109**, 973
Cohen, Bernard L. and Allen G. Rubin. Further studies of anomalous inelastic proton scattering—**111**, 1568
—— (see Fulmer, Clyde B.)—**109**, 94; **112**, 1672
Cohen, Leslie. γ rays from Rb^{84m}—**111**, 587
—— (see Tobin, R.)—**110**, 1388
Cohen, S. G. (see Bauminger, E. R.)—**110**, 953
Cohen, Stanley, David L. Judd, and Robert J. Riddell, Jr. μ-mesonic molecular ions and nuclear catalysis—**110**, 1471(L)
Cohn, H. O. (see Fowler, J. L.)—**109**, 89
—— (see Wills, J. E., Jr.)—**109**, 891
Colgate, Stirling A. (see Anderson, Oscar A.)—**109**, 612(L); **110**, 1375
Collie, C. H. (see Thornton, D. E. J.)—**109**, 480
—— (see Whitehead, C.)—**110**, 941
Collins, George B. (see Berley, David)—**112**, 614
Collins, R. J. and D. G. Thomas. Photoconduction and surface effects with ZnO crystals—**112**, 388
Commins, Eugene D. (see Novick, Robert)—**111**, 822
Compton, W. Dale and Clifford C. Klick. Some low-temperature properties of R, M, and N centers in KCl and NaCl—**112**, 1620
—— **and Clifford C. Klick.** Symmetry of H center in KCl and KBr—**110**, 349
Conner, Jerry P. Total neutron cross sections near 14.1 Mev—**109**, 1268
Conversi, M. (see Eisler, F.)—**112**, 979
Cook, C. W., W. A. Fowler, C. C. Lauritsen, and T. Lauritsen. High-energy α particles from B^{12}—**111**, 567
Coombes, Charles A., Bruce Cork, William Galbraith, Glen R. Lambertson, and William A. Wenzel. Antiproton-proton cross sections at 133, 197, 265, and 333 Mev—**112**, 1303
Coon, J. H., R. W. Davis, H. E. Felthauser, and D. B. Nicodemus. Scattering of 14.5-Mev neutrons by complex nuclei—**111**, 250
Cooper, B. R. Magnetic anisotropy constant of yttrium iron garnet at 0°K—**112**, 395
Cooper, C. Dewey and M. Lichtenstein. Spectra of A, O_2, and N_2 mixtures—**109**, 2026
Corbett, J. W. and R. M. Walker. Discrete recovery spectrum below 65°K in irradiated Cu—**110**, 767(L)
Corenzwit, E. (see Matthias, B. T.)—**112**, 89
Cork, Bruce (see Coombes, Charles A.)—**112**, 1303
Cork, J. M., M. K. Brice, R. G. Helmer, and R. M. Woods, Jr. Additional data on radioactive decay of Ho^{166} (27 hr), Nd^{147}, and Sm^{153}—**110**, 526
Corliss, L. M. (see Donnay, G.)—**112**, 1917
Coryell, Charles D. (see Alexander, J. M.)—**111**, 228
Costa, G. and B. T. Feld. Possible method for determining intrinsic parity of K meson—**109**, 606(L)
—— (see Feld, B. T.)—**110**, 968
Coté, Robert E., L. M. Bollinger, and James M. LeBlanc. Measurement of neutron strength function Γ_n^0/D for nuclides with 45 to 75 nucleons—**111**, 288
—— (see Saplakoglu, A.)—**109**, 1258
Cotts, R. M. (see Sarles, L. R.)—**111**, 853
Cowan, Clyde L., Jr. (see Reines, Frederick)—**109**, 609(L)
Cowan, Monroe and Walter Gordy. Precision measurements of millimeter and submillimeter wave spectra: DCl, DBr, and DI—**111**, 209
Cowan, Robert D. and John G. Kirkwood. Quantum statistical theory of electron correlation—**111**, 1460
Cox, S., P. Fields, A. Friedman, R. Sjoblom, and A. Smith. Delayed neutrons from spontaneous fission of Cf^{252}—**112**, 960
Cranberg, L. and J. S. Levin. Inelastic neutron scattering by U^{238}—**109**, 2063
Cranston, F. P., Jr., M. E. Bunker, and J. W. Starner. Decay of Er^{171}—**110**, 1427
Crawford, Frank S., Jr. (see Alvarez, Luis W.)—**112**, 1267
Creager, Charles B. (see Mitchell, Allan C. G.)—**111**, 1343
Cressman, Paul J. and Roger G. Wilkinson. Internal conversion coefficients of $M1$ γ rays of Au^{199} and Au^{195}—**109**, 872
Crew, J. E. and R. D. Hill. Interaction of 1.5-Bev negative π mesons with emulsion nuclei—**110**, 177
Crowe, Kenneth M. (see Macq, Pierre C.)—**112**, 2061
Cullen, James A. Surface currents induced by short-wavelength radiation—**109**, 1863
Culvahouse, J. W. and F. M. Pipkin. Experimental study of spin-lattice relaxation times in As-doped Si—**109**, 319
—— (see Pipkin, F. M.)—**109**, 1423
Cumming, James B., G. Friedlander, and C. E. Swartz. $C^{12}(p,pn)C^{11}$ cross section at 2 and 3 Bev—**111**, 1386
—— **and Noah R. Johnson.** Decay of Se^{72}—**110**, 1104
Cuperman, S. (see Lipkin, H. J.)—**109**, 223(L)
Curtis, R. B. (see Lewis, R. R.)—**110**, 910
Cutkosky, R. E. Meson exchange effects in two-nucleon states—**112**, 1027
—— Radiative meson-nucleon scattering—**109**, 209
Cutler, P. H. and J. J. Gibbons. Model for surface potential barrier and periodic deviations in Schottky effect—**111**, 394
Czyż, W. and J. Sawicki. Polarization of nucleons from $D(\gamma,p)n$ reaction at medium energies—**110**, 900

Daehnick, W. W. and J. M. Fowler. Investigation of $D(d,n)He^3$ neutrons at 8.4 Mev—**111**, 1309
Dalitz, R. H. Parity nonconservation in decay of free and bound Λ-particles—**112**, 605
—— **and B. W. Downs.** Hypernuclear binding energies and Λ-nucleon interaction—**111**, 967
—— **and B. W. Downs.** Remarks on hypertriton—**110**, 958
Dalven, Richard (see Garland, C. W.)—**111**, 1232
Daniel, P. J., Ruth F. Schwarz, M. E. Lasser, and L. W. Hershinger. Control of luminescence by charge extraction—**111**, 1240
Daniel, R. R. (see Appa Rao, M. V. K.)—**110**, 751
Daniels, W. B. and Charles S. Smith. Pressure derivatives of elastic constants of Cu, Ag, and Au, to 10 000 bars—**111**, 713
Danielson, G. C. (see Morris, R. G.)—**109**, 1909
—— (see Redin, R. D.)—**109**, 1916
Danielson, R. E. and P. S. Freier. Geomagnetic effects of heavy primary cosmic radiation at 42°N—**109**, 151
Darden, S. E. (see Boreli, F.)—**109**, 2079
Das, T. P. (see Blumberg, W. E.)—**110**, 647
—— (see Mukherji, A.)—**111**, 1479
—— (see Wikner, E. G.)—**109**, 360
Daunt, J. G. (see Brewer, D. F.)—**110**, 282(L)
—— (see Gager, W. B.)—**111**, 803
Davis, C. F., Jr., M. W. P. Strandberg, and R. L. Kyhl. Direct measurement of electron spin-lattice relaxation times—**111**, 1268
—— (see Strandberg, M. W. P.)—**109**, 1988
Davis, R. W. (see Coon, J. H.)—**111**, 250
DeBitetto, D. J. and L. H. Fisher. Second Townsend coefficient in O_2 at high pressures—**111**, 390

Decker, D. L., D. E. Mapother, and R. W. Shaw. Critical-field measurements on superconducting Pb isotopes—**112**, 1888
—— (see Hake, R. R.)—**112**, 1522
de Figueiredo, R. P., M. Mazari, and W. W. Buechner. Excited states of Cu^{64} and Cu^{66}—**112**, 873
Dehmelt, H. G. Spin resonance of free electrons polarized by exchange collisions—**109**, 381
Delbecq, C. J., B. Smaller, and P. H. Yuster. Optical absorption of Cl_2^- molecule-ions in irradiated KCl—**111**, 1235
deMars, G. A. (see Statz, H.)—**111**, 169
Dempsey, C. W. and R. C. Sapp. Magnetic anisotropy in single crystal ferric ammonium alum below its magnetic critical point—**110**, 327
—— **and R. C. Sapp.** Relaxation effects in magnetization of chromic methylamine alum below its Néel point—**110**, 332
Denisenko, G. F., N. S. Ivanova, N. R. Novikova, N. A. Perfilov, E. I. Prokoffieva, and V. P. Shamov. Fission of U, Ag, and Br nuclei with high-energy particles—**109**, 1779
Derbyshire, W. D. and H. J. Yearian. X-ray diffraction and magnetic measurements of Fe-Cr spinels—**112**, 1603
de-Shalit, A. (see Lipkin, H. J.)—**109**, 223(L)
Deslattes, Richard D. Number of 3*d* electrons in transition metals—**110**, 1471(L)
Desloge, Edward A., Steven W. Matthysse, and Henry Margenau. Conductivity of plasmas to microwaves—**112**, 1437
DeSorbo, Warren. Quenched imperfections and electrical resistivity of Al at low temperatures—**111**, 810
de Swart, J. J. and R. E. Marshak. Phenomenological theory of photodisintegration of deuteron in medium energy range —**111**, 272
Devlin, G. E. (see Schawlow, A. L.)—**110**, 1011
Devooght, J. New variational principle for transport theory —**111**, 665
DeWire, J. W., H. E. Jackson, and Raphael Littauer. High-energy photoproduction of π^0 mesons from H—**110**, 1208(L)
de Wit, Michiel and Loyal Durand, III. Effects of vacuum polarization scattering in treatment of *p*-*p* scattering data—**111**, 1597
Dexter, D. L. Refractive index and Faraday effect in solid solution—**111**, 119
de Zafra, R. L. and W. T. Joyner. Temperature effect on positron annihilation in condensed matter—**112**, 19
Dick, B. G., Jr., and A. W. Overhauser. Theory of dielectric constants of alkali halide crystals—**112**, 90
Dickerman, Charles E. Angular distributions of two proton groups from reaction $Na^{23}(d,p)Na^{24}$—**109**, 443
Dieke, G. H. (see Thekaekara, M.)—**109**, 2029
Dillman, L. T. (see Gove, N. B.)—**112**, 489
Dillon, J. F., Jr. Ferrimagnetic resonance in yttrium iron garnet at liquid He temperatures—**111**, 1476
—— Magnetostatic modes in ferrimagnetic spheres—**112**, 59
Diven, B. C., J. Terrell, and A. Hemmendinger. Capture to fission ratios for fast neutrons in U^{238}—**109**, 144
Domenicali, C. A. Thermoelectric power and electron scattering in metal alloys. II—**112**, 1863
Donnay, G., L. M. Corliss, J. D. H. Donnay, N. Elliott, and J. M. Hastings. Symmetry of magnetic structures: magnetic structure of chalcopyrite—**112**, 1917
Donnay, J. D. H. (see Donnay, G.)—**112**, 1917
Donnelly, R. J. Rotation of liquid He at low Reynolds numbers —**109**, 1461
Donoho, P. L. and R. L. Walker. Photoproduction of K^+ mesons in H—**112**, 981
Donovan, B. and N. H. March. Positron annihilation in noble metals—**110**, 582(L)
Dorain, Paul B. Electron paramagnetic resonance of Mn^{++} in hexagonal ZnO and CdS single crystals—**112**, 1058
Dostrovsky, I., P. Rabinowitz, and R. Bivins. Monte Carlo calculations of high-energy nuclear interactions. I. Systematics of nuclear evaporation—**111**, 1659
Dougal, A. A. and L. Goldstein. Energy exchange between electron and ion gases through Coulomb collisions in plasmas—**109**, 615
Douglas, R. A. (see Bashkin, S.)—**109**, 434
Dousmanis, George C. Semiconductor surface potential and surface states from field-induced changes in surface recombination—**112**, 369
Downs, B. W. (see Dalitz, R. H.)—**110**, 958; **111**, 967
Doyle, William T. Absorption of light by colloids in alkali halide crystals—**111**, 1067
—— Optical absorption by *F* centers in alkali halides—**111**, 1072
Drachman, Richard J. Meson pair theory in intermediate coupling—**109**, 996
Drake, C. W., V. W. Hughes, A. Lurio, and J. A. White. Magnetic moment of He in its $^3S_1$ metastable state—**112**, 1627
Draper, J. E., C. A. Fenstermacher, and H. L. Schultz. Variations in spectra of resonance neutron capture γ rays in In—**111**, 906
Drell, S. D. and C. L. Schwartz. Sum rules for inelastic electron scattering—**112**, 568
—— **and F. Zachariasen.** Form factors in quantum electrodynamics—**111**, 1727
—— (see Bjorken, J. D.)—**112**, 1409
Dresselhaus, G. (see Mattis, Daniel Charles)—**111**, 403
Dropesky, B. J. (see Hoffman, D. C.)—**109**, 1282
Drummond, J. E. Basic microwave properties of hot magnetoplasmas—**110**, 293
—— Microwave propagation in hot magnetoplasmas—**112**, 1460
Dubey, V. S., S. S. Malik, C. E. Mandeville, and Ambuj Mukerji. Radiations of Os^{193} and Os^{191}—**111**, 920; **112**, 2139(E)
—— (see Mukerji, Ambuj)—**111**, 1319
Duerr, Hans-Peter. Nuclear scattering of nucleons and antinucleons—**109**, 1347
—— Nuclear symmetry energy—**109**, 117
Duffield, Robert B. and Stanley H. Vegors, Jr. Five new isomers with half-lives between 10^{-6} and 10^{-1} second—**112**, 1958
DuMond, J. W. M. (see Chupp, E. L.)—**109**, 2036; **112**, 518; **112**, 532; **112**, 1183
—— (see Merrill, John J.)—**110**, 79
Dunning, K. L., J. W. Butler, and R. O. Bondelid. Mass, half-life, and excited states of B^8—**110**, 1076
Durand, J. L. (see Benedict, T. S.)—**109**, 1091
Durand, Loyal, III, Leon F. Landovitz, and Jack Leitner. Tests for spin in decay of particles of arbitrary spin—**112**, 273
—— (see de Wit, Michiel)—**111**, 1597
Dutton, David. Fundamental absorption edge in CdS—**112**, 785
Dwight, Kirby (see Menyuk, Norman)—**112**, 397
Dyer, John N. (see Barkas, Walter H.)—**112**, 622
Dyson, Freeman J. Connection between local commutativity and regularity of Wightman functions—**110**, 579
—— Integral representations of causal commutators—**110**, 1460
—— Integral representation of double commutator—**111**, 1717

Easterday, H. T. (see Forrest, R. N.)—**112**, 950
Eastman, P. C. (see Sodha, M. S.)—**110**, 1314; **112**, 44
Edmonds, A. R. (see Chase, D. M.)—**110**, 1080

Ehrenberg, Hans F. and Robert Hofstadter. Incoherent electron scattering from nucleons in Be and C and magnetic size of neutron—**110**, 544
Einspruch, Norman G. and Rohn Truell. Megacycle attenuation and Bordoni peaks—**109**, 652
Eisenhauer, C. M., I. Pelah, D. J. Hughes, and H. Palevsky. Measurement of lattice vibrations in V by neutron scattering—**109**, 1046
Eisinger, J. and G. Feher. Hfs anomaly of Sb^{121} and Sb^{123} determined by electron nuclear double resonance technique—**109**, 1172
Eisler, F., R. Plano, A. Prodell, N. Samios, M. Schwartz, J. Steinberger, M. Conversi, P. Franzini, I. Manelli, R. Stangelo, and V. Silvestrini. Leptonic decay modes of hyperons—**112**, 979
——, **R. Plano, N. Samios, J. Steinberger, and M. Schwartz.** Associated production of Σ^0 and θ_2^0; mass of Σ^0—**110**, 226
Eklund, K. E. and R. D. Bent. Search for electric monopole pairs from 3.82-Mev state of Ca^{48}—**112**, 966
—— **and R. D. Bent.** Search for $0^- \to 0^+$ pair transition in O^{16}—**112**, 488
Ekstein, H., J. Swihart, and K. Tanaka. Representationless formalism in field theory of fixed nucleons—**109**, 557
Elcock, E. W. and C. W. McCombie. Vacancy diffusion in binary ordered alloys—**109**, 605(L)
Elford, M. T. (see White, G. K.)—**112**, 111
El-Hussaini, Jassim M. and S. T. Stephenson. Single-crystal orientation effects in K x-ray absorption spectra of Ge—**109**, 51
Elioff, T. (see Agnew, L.)—**110**, 994(L)
Elliott, N. (see Donnay, G.)—**112**, 1917
Ellis, S. G., F. Herman, E. E. Loebner, W. J. Merz, C. W. Struck, and J. G. White. Photovoltages larger than band gap in ZnS crystals—**109**, 1860(L)
Elwyn, A. J., H. H. Landon, Sophie Oleksa, and G. N. Glasoe. Study of some (p,n) reactions by neutron time of flight—**112**, 1200
—— **and F. B. Shull.** Proton angular distributions from $Cr^{52,53}(d,p)$ reaction—**111**, 925
—— (see Landon, H. H.)—**112**, 1192
—— (see Shull, F. B.)—**112**, 1667
Emeleus, K. G. (see Mahaffey, D. W.)—**112**, 1052
Endt, P. M. and C. H. Paris. Nuclear levels in P^{30}, S^{33}, and S^{35}—**110**, 89
—— (see Smith, P. B.)—**110**, 397; **110**, 1442
—— (see van der Leun, C.)—**110**, 96
Engelkemeir, D. W. (see Gindler, J. E.)—**109**, 1263
Engler, A., M. F. Kaplon, and J. Klarmann. Flux of cosmic-ray particles with $Z \geq 2$ over Texas—**112**, 597
Erickson, G. W. and W. B. Cheston. Scattering of protons in spin-orbit potential—**111**, 891
Eriksen, Erik. Foldy-Wouthuysen transformation. Exact solution with generalization to two-particle problem—**111**, 1011
Erwin, A. R., Jr., and J. K. Kopp. π^--proton scattering at 950 Mev—**109**, 1364
Esaki, Leo. New phenomenon in narrow Ge p-n junctions—**109**, 603(L)
Estle, T. L., H. R. Hart, Jr., and J. C. Wheatley. Nuclear magnetic resonance in cerous magnesium nitrate at temperatures below 1°K—**112**, 1576
Etzel, H. W. and D. A. Patterson. Optical properties of alkali halides containing hydroxyl ions—**112**, 1112
Ewan, G. T. (see Geiger, J. S.)—**112**, 1684
Ewbank, Wesley B., W. A. Nierenberg, H. A. Shugart, and H. B. Silsbee. Spins of Ag^{105}, Ag^{106}, and Ag^{110m}—**110**, 595(L)
—— (see Marino, Lawrence L.)—**111**, 286
Ewing, R. D. (see Spence, R. D.)—**112**, 1544
Evans, N. T. S. and A. P. French. Nucleon exchange effects in $B^{10}(d,p)$ stripping reactions—**109**, 1272
Eyges, Leonard. Solution of Schrödinger equation for particle bound to more than one spherical potential—**111**, 683

Fagg, L. W. Coulomb excitation of Sb, Cs, and Ba—**109**, 100
Fairhall, A. W. (see Jensen, R. C.)—**109**, 942
Famularo, K. F. (see Freier, G. D.)—**110**, 446
Fan, H. Y. (see Laff, R. A.)—**112**, 317
—— (see Spitzer, W. G.)—**109**, 1011(L)
Fano, U., H. W. Koch, and J. W. Motz. Evaluation of bremsstrahlung cross sections at high-frequency limit—**112**, 1679
Farinelli, U., F. Ferrero, R. Malvano, S. Menardi, and E. Silva. Photoexcitation of Pb^{207m}—**112**, 1994
Farnsworth, H. E. (see Fowler, H. A.)—**111**, 103
—— (see Madden, H. H.)—**112**, 793
Faughnan, B. W. (see Strandberg, M. W. P.)—**109**, 1988
Feder, R. and A. S. Nowick. Use of thermal expansion measurements to detect lattice vacancies near melting point of pure Pb and Al—**109**, 1959
Federbush, P., M. L. Goldberger, and S. B. Treiman. Electromagnetic structure of nucleon—**112**, 642
Feher, G., J. P. Gordon, E. Buehler, E. A. Gere, and C. D. Thurmond. Spontaneous emission of radiation from electron spin system—**109**, 221(L)
—— (see Eisinger, J.)—**109**, 1172
Fein, Alvin E. Influence of variable ejection probability on displacement of atoms—**109**, 1076
Feinberg, Gerald. Decays of μ meson in intermediate-meson theory—**110**, 1482(L)
—— Effects of electric dipole moment of electron on H energy levels—**112**, 1637
—— Electromagnetic interaction of neutral K meson—**109**, 1381
—— Internal pair creation in Σ^0 decay—**109**, 1019(L)
Feld, B. T. and G. Costa. Photoproduction of K mesons and intrinsic parities of strange particles—**110**, 968
—— (see Costa, G.)—**109**, 606(L)
Feldman, Gordon and P. T. Matthews. Hyperon production in nucleon-nucleon collisions—**109**, 546
Felthauser, H. E. (see Coon, J. H.)—**111**, 250
Fenstermacher, C. A. (see Draper, J. E.)—**111**, 906
Ferguson, G. A., Jr., and M. Hass. Magnetic structure and vacancy distribution in γ-Fe_2O_3 by neutron diffraction—**112**, 1130
Ferguson, James M. Al^{26} decay scheme—**112**, 1238
Fernbach, S. (see Bjorklund, F.)—**109**, 1295
Ferrell, Richard A. Ortho-parapositronium quenching by paramagnetic molecules and ions—**110**, 1355
—— Predicted radiation of plasma oscillations in metal films—**111**, 1214
—— **and Rolfe E. Glover, III.** Conductivity of superconducting films: sum rule—**109**, 1398(L)
—— (see Quinn, John J.)—**112**, 812
Ferrero, F. (see Farinelli, U.)—**112**, 1994
Feynman, R. P. and W. Gell-Mann. Theory of Fermi interaction—**109**, 193
Field, L. M. (see Boyd, G. D.)—**109**, 1393(L)
Fields, P. (see Cox, S.)—**112**, 960
—— (see Smith, A.)—**111**, 1633
Fields, T. H., J. G. Fox, J. A. Kane, R. A. Stallwood, and R. B. Sutton. Reaction $p+p \to \pi^+ + d$ in 425-Mev energy region—**109**, 1704
——, **J. G. Fox, J. A. Kane, R. A. Stallwood, and R. B. Sutton.** Total cross section for $p+p \to \pi^+ + p + n$ at 437 Mev—**109**, 1713
—— (see Stallwood, R. A.)—**109**, 1716
Fink, R. W. (see Wille, R. G.)—**112**, 1950
Finkelstein, David. Past-future asymmetry of gravitational field of point particle—**110**, 965

Finkelstein, R. General covariance and elementary particles—110, 1200
—— Permutation symmetries of generalized β interactions—109, 1842
Fischer, G. E., V. K. Fischer, E. A. Remler, and M. D. Tatcher. Anomalous behavior of $Al^{27}(p,\alpha)Mg^{24}$ differential cross sections—110, 286(L)
Fischer, J., R. March, and L. Marshall. Measurement of Panofsky ratio: nuclear absorption of π^- from K shell in H—109, 533
Fischer, V. K. (see Fischer, G. E.)—110, 286(L)
Fisher, L. H. (see DeBitetto, D. J.)—111, 390
Fisher, P. S. and R. A. Naumann. 4+ excited state in Os^{188}—112, 1717
Fitch, V. L. (see Panofsky, W. K. H.)—109, 1353
Fite, Wade L. and R. T. Brackmann. Collisions of electrons with H atoms. I. Ionization—112, 1141
—— **and R. T. Brackmann.** Collisions of electrons with H atoms. II. Excitation of Lyman-α radiation—112, 1151
——, **R. Theodore Brackmann, and William R. Snow.** Charge exchange in proton-H-atom collisions—112, 1161
—— (see Brackmann, R. T.)—112, 1157
Fitz, H. C., Jr., William B. Good, James L. Kassner, Jr., and Arthur E. Ruark. Cloud chamber search for particles ionizing less than an electron—111, 1406
Fitzgerald, Edwin R. Mechanical resonance dispersion in quartz at audio-frequencies—112, 765
—— Mechanical resonance dispersion in single crystals—112, 1063
Fletcher, John G. and David C. Larson. Influence of electron interactions on metallic properties—111, 455; 112, 2139(E)
Fletcher, P. C. and E. Amble. Spin and quadrupole moment of I^{125} and magnetic moment of I^{131}—110, 536
Foldy, Leslie L. Fermi-Segrè formula—111, 1093
Foley, H. M. (see Sessler, A. M.)—110, 995(L)
—— (see Traub, J.)—111, 1098
Foner, S. N. (see Jen, C. K.)—112, 1169
Foner, Simon, F. E. Allison, and Emerson M. Pugh. Hall effect in Ni_2Mn and Fe-Co as function of order—109, 1129
Foote, H. L., Jr. Neutron scattering cross section of U^{235}—109, 1641
Ford, G. W. and C. J. Mullin. Energy distribution of inelastically scattered electrons—110, 520
—— **and C. J. Mullin.** Scattering of polarized Dirac particles on electrons—110, 1485(E)
Ford, Joseph. Approach of one-dimensional systems to equilibrium—112, 1445
Ford, Kenneth W. (see True, William W.)—109, 1675
Forrest, R. N. and H. T. Easterday. Radiations of Xe^{127}—112, 950
Forrester, A. Theodore. Superconducting energy gap inferences from thin-film transmission data—110, 776(L)
Forstat, H. Length effect in heat transport in He II—111, 1450
Fowler, Earle C. (see Lea, Robert)—110, 748
Fowler, H. A. and H. E. Farnsworth. Reflection of very slow electrons—111, 103
Fowler, J. L. and H. O. Cohn. Oxygen differential neutron scattering and phenomenological nuclear potentials—109, 89
Fowler, J. M. (see Daehnick, W. W.)—111, 1309
—— (see Zeidman, B.)—112, 2020
Fowler, T. K. Quasielastic scattering of pions by nuclei—112, 1325
Fowler, W. A. (see Cook, C. W.)—111, 567
Fowler, W. B. (see Agnew, L.)—110, 994(L)
Fox, J. D., R. L. Zimmerman, D. J. Hughes, H. Palevsky, M. K. Brussel, and R. E. Chrien. Measurement of spins of levels excited by slow neutron capture—110, 1472(L)
Fox, J. G. (see Fields, T. H.)—109, 1704; 109, 1713
—— (see Stallwood, R. A.)—109, 1716
Fox, R. E. Dissociative attachment of electrons in I_2. II. Mass spectrographic determination of energy dependence of cross section—109, 2008
—— (see Biondi, Manfred A.)—109, 2012
Frank, Wilson J. (see Bandtel, Kenneth C.)—109, 2117; 110, 1484(E)
Frankl, D. R. Electroluminescence of ZnS single crystals with cathode barriers—111, 1540
Franklin, J. and B. Margolis. Scattering of μ^- mesons by nuclei—109, 525
——, **B. Margolis, and H. Oberthal.** Scattering of μ^- mesons by nuclei—111, 296
Frantz, Lee M. Field theory of deuteron exchange currents—111, 346
Franzini, P. (see Eisler, F.)—112, 979
Fraser, J. S. (see Milton, J. C. D.)—111, 877
Frauenfelder, H., J. D. Jackson, and H. W. Wyld, Jr. Polarization effects following β decay—110, 451
Frautschi, S. C. (see Bjorken, J. D.)—112, 1409
Frazer, B. C. Magnetic structure of Fe_4N—112, 751
Fred, Mark, Frank S. Tomkins, and William F. Meggers. Nuclear moments of Ac^{227}—111, 1747(E)
Frederikse, H. P. R. and W. R. Hosler. Oscillatory galvanomagnetic effects in n-type InAs—110, 880
Freeman, A. J. and P. O. Löwdin. Quantum mechanical kinetic energy transformation—111, 1212
Freeman, J. R. (see Kallmann, Hartmut)—109, 1506
Freier, G. D., K. F. Famularo, D. M. Zipoy, and J. Leigh. Elastic scattering of protons by A^{40}—110, 446
Freier, P. S. (see Danielson, R. E.)—109, 151
French, A. P. (see Evans, N. T. S.)—109, 1272
Fried, H. M. and D. R. Yennie. New techniques in Lamb shift calculation—112, 1391
Friedberg, S. A. (see Burk, D. L.)—111, 1275
Friedlander, G. (see Baker, E.)—112, 1319
—— (see Caretto, A. A.)—110, 1130; 110, 1169
—— (see Cumming, J. B.)—111, 1386
—— (see Markowitz, Samuel S.)—112, 1295
—— (see Metropolis, N.)—110, 185; 110, 204
Friedman, A. (see Cox, S.)—112, 960
—— (see Smith, A.)—111, 1633
Friedman, Lewis and Lincoln G. Smith. Mass difference T-He^3 and mass of neutrino—109, 2214(L)
Frisch, Harry L. Approach to equilibrium—109, 22
—— (see Kaiser, W.)—112, 1546
Fröman, Anders. Correlation energies of some He- and Ne-like systems—112, 870
Fronsdal, C. and H. Überall. Polarization of bremsstrahlung from polarized electrons—111, 580
Frost, R. T. and S. S. Hanna. Reaction $Li^6(d,t)Li^5(p)He^4$—110, 939
Fry, W. F. and R. G. Sachs. Method for determining $\theta_1-\theta_2$ mass difference—109, 2212(L)
—— (see Baldo-Ceolin, M.)—112, 2118
Frye, Glenn M., Jr., and Alice H. Armstrong. Evidence for production of neutral pion in antiproton annihilation event—110, 170
Fryer, Edward M. (see Wyman, Marvin E.)—112, 1264
Fubini, S., Y. Nambu, and V. Wataghin. Dispersion theory treatment of pion production in electron-nucleon collisions—111, 329
Fuchs, M. (see Bardon, M.)—110, 780(L)
Fuchs, Ronald. Theory of β band in alkali halide crystals—111, 387
Fulco, Jose R. Theoretical angular distribution of nucleon-antinucleon scattering at 140 Mev—110, 784(L)
Fuller, E. G., E. Hayward, and H. W. Koch. Shape of high-energy end of electron-bremsstrahlung spectrum—109, 630
——, **B. Petree, and M. S. Weiss.** Photoneutron yields in rare-earth region—112, 554

—— **and M. S. Weiss.** Splitting of giant resonance for deformed nuclei—**112**, 560
Fulmer, Clyde B. and Bernard L. Cohen. Equilibrium charges of fission fragments in gases—**109**, 94
—— **and Bernard L. Cohen.** (p,α) reactions induced by 23-Mev protons—**112**, 1672
Fultz, S. C. (see Hickok, R. L.)—**109**, 113
Funk, E. G., Jr., and M. L. Wiedenbeck. Decay of Ag^{110m}—**112**, 1247
——, **and M. L. Wiedenbeck.** Directional correlation of γ rays of Se^{78}—**109**, 922
Furst, M. and H. Kallmann. Cross quenching of fluorescence in organic solutions—**109**, 646
Furth, Harold P. (see Anderson, Oscar A.)—**109**, 612(L)

Gabbe, John D. Some measurements of atmospheric neutrons—**112**, 497
Gager, W. B., P. S. Jastram, and J. G. Daunt. Paramagnetic resonance spectrum of Co in cerium magnesium nitrate at 4°K—**111**, 803
Gailar, O. H., E. Bleuler, and D. J. Tendam. Scattering of 18.7-Mev α particles from Al, Cu, and Ag—**112**, 1989
Galanin, A. D. (see Abrikosov, A. A.)—**111**, 321
Galbraith, William (see Coombes, Charles A.)—**112**, 1303
Gall, R. (see Vallarta, M. S.)—**109**, 1403(L)
Gallagher, C. J., Jr., and S. A. Moszkowski. Coupling of angular momenta in odd-odd nuclei—**111**, 1282
——, **and J. O. Rasmussen.** High-resolution electron spectroscopic study of 60-hr electron-capturing isomer Re^{182}—**112**, 1730
——, **D. Strominger, and J. P. Unik.** Decay scheme of 50-day Re^{184}—**110**, 725; **111**, 1746(E)
—— (see Johnson, C. H.)—**109**, 1243
—— (see Moak, C. D.)—**110**, 1369
Galt, J. K. (see Boyle, W. S.)—**109**, 1396(L)
Gamba, A. Cooperative phenomena in quantum theory of radiation—**110**, 601
Gammel, J. L. and R. M. Thaler. Phase shifts for p-α scattering polarization in p-α scattering for proton laboratory energies from 0 to 40 Mev—**109**, 2041
—— (see Brueckner, K. A.)—**109**, 1023; **109**, 1040; **110**, 431
Gandy, H. W. Cathodoluminescence of SrO, (BaSr)O, and MgO—**111**, 764
Gardner, C. C. (see Anderson, J. D.)—**110**, 160; **111**, 572
—— (see Nakada, M. P.)—594(L); **110**, 572
Garfinkel, M. and P. Lindenfeld. Lattice conductivity of Sn—**110**, 883
Garland, C. W. and Richard Dalven. Elastic constants of Zn from 4.2°K to 77.6°K—**111**, 1232
Garth, R. C. (see Seth, K. K.)—**110**, 692
Garvin, Hugh L., Thomas M. Green, and Edgar Lipworth. Spins of some radioactive I isotopes—**111**, 534
Garwin, R. L. (see Coffin, T.)—**109**, 973
Gasiorowicz, Stephen and M. A. Ruderman. Identical scattering from causal and noncausal interactions—**110**, 261
—— (see Chew, Geoffrey F.)—**110**, 265
Gasten, B. R. (see Herring, D. F.)—**112**, 1210
Gatto, R. Possible experimental test of universal Fermi interaction—**111**, 1426
—— Relations between hyperon polarizations in associated production—**109**, 610(L)
Gavenda, J. D. (see Morse, R. W.)—**109**, 1394(L)
Geballe, T. H. and G. W. Hull. Isotopic and other types of thermal resistance in Ge—**110**, 773(L)
—— (see Herring, C.)—**111**, 36
Geffen, D. A. Dispersion relations for pion-proton scattering—**112**, 1370
Geiger, J. S., G. T. Ewan, R. L. Graham, and D. R. MacKenzie. Measurements on longitudinal polarization of β rays from P^{32}, Y^{90}, Pr^{144}, Au^{198}, and Bi^{210} (RaE)—**112**, 1684
Geller, Seymour (see Gilleo, M. A.)—**110**, 73
—— (see Knox, Kerro)—**110**, 771(L)
Gelles, I. L. (see Keller, S. P.)—**110**, 850
—— (see Sorokin, P. P.)—**112**, 1513
Gell-Mann, Murray. Test of nature of vector interaction in β-decay—**111**, 362; **112**, 2139(E)
—— (see Feynman, R. P.)—**109**, 193
Geltman, Sydney. Theory of threshold energy dependence of photodetachment of diatomic molecular negative ions—**112**, 176
—— (see Branscomb, Lewis M.)—**111**, 504
Gere, E. A. (see Feher, G.)—**109**, 221(L)
Gerhart, J. B. Fierz interference of Fermi interactions in β decay—**109**, 897; **111**, 1746(E)
Gerholm, T. R. and B. G. Pettersson. Evidence for presence of $E0$ in direct competition with $M1$ and $E2$—**110**, 1119
Gerjuoy, E. Outgoing boundary condition in rearrangement collisions—**109**, 1806
Geusic, J. E. and L. Carlton Brown. Computation of principal components of asymmetric $\mathfrak{g}$ tensor from paramagnetic resonance data—**112**, 64
Ghiorso, Albert (see Sikkeland, Torbjørn)—**112**, 543
Giambuzzi, S. (see Lannutti, Joseph E.)—**109**, 2121
Giardini, A. A. (see Poindexter, Edward)—**110**, 1069
Gibbons, D. F. Thermal expansion of some crystals with diamond structure—**112**, 136; **112**, 2139(E)
—— **and V. G. Chirba.** Acoustical loss and Young's modulus of yttrium iron garnet—**110**, 770(L)
Gibbons, J. H. (see Good, W. M.)—**109**, 926
—— (see Macklin, R. L.)—**109**, 105
Gibbons, J. J. (see Cutler, P. H.)—**111**, 394
Giese, Clayton F. and Jay L. Benson. Atomic masses from P through Mn—**110**, 712
Gilbert, Francis C. and R. Stephen White. K^--meson captures by bound neutrons—**109**, 1770
Giles, Peter C. (see Barkas, Walter H.)—**112**, 622
Gilleo, M. A. Superexchange interaction energy for $Fe^{3+}-O^{2-}-Fe^{3+}$ linkages—**109**, 777
—— **and S. Geller.** Magnetic and crystallographic properties of substituted Y-Fe garnet, $3Y_2O_3 \cdot xM_2O_3 \cdot (5-x)Fe_2O_3$—**110**, 73
Gilvarry, J. J. and N. H. March. Asymptotic solution of Thomas-Fermi equation for large atom radius—**112**, 140
Gilly, L. (see Agnew, L.)—**110**, 994(L)
Gindler, J. E., J. R. Huizenga, and D. W. Engelkemeir. Np isotopes: 234, 235, 236—**109**, 1263
Giordmaine, J. A., L. E. Alsop, F. R. Nash, and C. H. Townes. Paramagnetic relaxation at very low temperatures—**109**, 302
Glasoe, G. N. (see Elwyn, A. J.)—**112**, 1200
—— (see Landon, H. H.)—**112**, 1192
Glass, R. A. (see Vandenbosch, R.)—**111**, 1358
Glass, Solomon J. and Martin J. Klein. Thin ferromagnetic films—**109**, 288
Glasser, M. L. and J. Callaway. Electronic energy bands in Li—**109**, 1541
—— (see Callaway, Joseph)—**112**, 73
Glassgold, A. E. Interaction of antiprotons with complex nuclei—**110**, 220
—— **and P. J. Kellogg.** Nuclear scattering of 40- and 95-Mev protons—**109**, 1291
Glauber, R. J. (see Martin, P. C.)—**109**, 1307
Glicksman, Maurice. Effect of impurity scattering on magnetoresistance of n-type Ge—**109**, 2218(E)
—— Mobility of electrons in Ge-Si alloys—**111**, 125
—— **and M. C. Steele.** High electric field effects in n-InSb—**110**, 1204(L)
Glover, Rolfe E., III (see Ferrell, Richard A.)—**109**, 1398(L)
—— (see Tinkham, M.)—**110**, 778(L)
Gobeli, G. W. α-particle irradiation of Ge at 4.2°K—**112**, 732

Goebel, C. J. Parity of K meson from dispersion relation—110, 572
—— Use of Chew-Low equation in strong coupling—109, 1846
Goland, A. N. (see Antal, J. J.)—112, 103
—— (see Keating, D. T.)—111, 261
Gold, Wallace and Larry Spruch. Inner bremsstrahlung and magnetic moment of neutrino—110, 290(L)
Gol'danskii, V. I., A. E. Ignatenko, A. I. Mukhin, V. S. Pen'kina, and V. A. Shkoda-Ulyanov. Emission of secondary neutrons from nuclei bombarded by high-energy neutrons—109, 1762
—— (see Baranov, P. S.)—109, 1801
Goldberg, A. Electron-deuteron scattering by impulse approximation—112, 618
Goldberg, Colman. Relaxation time anisotropy in n-type Ge—109, 331
—— **and W. E. Howard.** Magnetoresistance symmetry relation in n-Ge—110, 1035
Goldberg, E. and H. L. Reynolds. Elastic scattering of C^{12} from Au—112, 1981
Goldberg, Irwin. Gauge-invariant quantum electrodynamics—112, 1361
Goldberg, J. N. Conservation laws in general relativity—111, 315
Goldberger, M. L. and S. B. Treiman. Conserved currents in theory of Fermi interactions—110, 1478(L)
—— **and S. B. Treiman.** Decay of π meson—110, 1178
—— **and S. B. Treiman.** Form factors in β decay and μ capture—111, 354
—— (see Federbush, P.)—112, 642
Goldemberg, J. (see Silva, E.)—110, 1102
Golden, Sidney. Spherical eigenfunctions and angular momentum distributions in the statistical theory of atoms—110, 1349
Goldhaber, Gerson, Theodor Kalogeropoulos, and Rein Silverberg. Antiproton-hydrogen scattering and inelastic scattering from complex nuclei—110, 1474(L)
—— **and Jack Sandweiss.** Elastic scattering of antiprotons from complex nuclei—110, 1476(L)
—— (see Igo, George)—109, 2133
—— (see Lannutti, Joseph E.)—109, 2121
Goldhaber, M., L. Grodzins, and A. W. Sunyar. Helicity of neutrinos—109, 1015(L)
——, **T. D. Lee, and C. N. Yang.** Decay modes of $(\theta+\tilde{\theta})$ system—112, 1796
—— (see Alburger, D. E.)—112, 1998
Goldhaber, Sulamith (see Igo, George)—109, 2133
—— (see Lannutti, Joseph E.)—109, 2121
Goldman, David T. and Albert Simon. Theory of sputtering by high-speed ions—111, 383
Goldring, G. and R. P. Scharenberg. Gyromagnetic ratio of 2^+ rotational states—110, 701
Goldstein, B. Properties of photovoltaic films of CdTe—109, 601(L)
Goldstein, L. and T. Sekiguchi. Electron-electron interaction and heat conduction in gaseous plasmas—109, 625
—— (see Dougal, A. A.)—109, 615
Goldstein, Louis. Thermal excitations in liquid He^3—112, 1465
—— Volume anomaly of liquid He^3 arising from its nuclear spin system—112, 1483
Gonser, Ulrich and Boudewÿn Okkerse. Radiation damage experiments and nature of thermal spikes in III–V compounds—109, 663
Good, Myron L. Method for determining $K_+{}^0-K_-{}^0$ mass difference—110, 550
Good, R. H., Jr. (see Hammer, C. L.)—111, 342
Good, W. M., J. H. Neiler, and J. H. Gibbons. Neutron total cross sections in kev region by fast time-of-flight measurements—109, 926
Good, William B. (see Fitz, H. C.)—111, 1406
Goodman, Bernard. Adiabatic *vs* Bloch approximation in lattice scattering of electrons—110, 888
Goodman, Charles D. and John L. Need. Energy distributions of product particles from nitrogen-induced nuclear reactions on Be—110, 676
—— (see Blosser, H. G.)—110, 531
Gordon, F. J. (see Chupp, E. L.)—109, 2036; 112, 518; 112, 532; 112, 1183
Gordon, J. P. (see Feher, G.)—109, 221(L)
Gordy, Walter (see Cowan, Monroe)—111, 209
Gorkov, L. P. (see Abrikosov, A. A.)—111, 321
Gossett, C. R. (see Butler, J. W.)—109, 863; 110, 1485(E); 112, 1257
Gould, R. W. (see Boyd, G. D.)—109, 1393(L)
Gourary, Barry S. Approximate wave functions for U center by point-ion-lattice method—112, 337
Gove, H. E., A. E. Litherland, E. Almqvist, and D. A. Bromley. γ rays from proton bombardment of Mg^{24}—111, 608
Gove, N. B., R. W. Henry, L. T. Dillman, and R. A. Becker. Isomers in Tb^{155} and Ho^{163}—112, 489
Graham, C. D., Jr. Magnetocrystalline anisotropy constants of Fe at room temperature and below—112, 1117
Graham, R. L. (see Geiger, J. S.)—112, 1684
Granato, Andrew. Thermal properties of mobile defects—111, 740
Graybeal, J. D. (see Burrus, C. A.)—109, 1553
Green, A. E. S. and P. C. Sood. Proton potential anomaly and nonlocal potentials—111, 1147
—— (see Swamy, N. V. V. J.)—112, 1719
Green, Ben A., Jr. Approach to equilibrium—112, 1053
Green, Louis C., Satoshi Matsushima, Cynthia Stephens, Eleanor K. Kolchin, Majorie M. Kohler, Yenking Wang, Barbara B. Baldwin, and Robert J. Wisner. Effect on energy of increased flexibility in separable factor of Hylleraas-type atomic wave function from H^- to O_{VII}—112, 1187
Green, T. A. and M. E. Rose. Nuclear structure effects in internal conversion—110, 105
Green, Thomas M. (see Garvin, Hugh L.)—111, 534
Greenburg, Joel. Effect of magnetic field on thermionic emission from Mo—112, 1898
Greene, Richard F. Effect of anisotropy on temperature dependence of elastic constants—111, 1505
Gregory, D. P. and D. Z. Landsman. Average decay energy of T—109, 2091
Griem, H. (see Kolb, A. C.)—111, 514
Griggs, D. T., W. G. McMillan, E. D. Michael, and C. P. Nash. Lack of metallic transition in LiH and $LiAlH_4$ under static pressure—109, 1858(L)
Grilly, E. R. (see Schuch, A. F.)—110, 775(L)
Grisaru, M. T. Fourth order nucleon-nucleon dispersion relations—111, 1719
Grodzins, L. Lifetime of 1^- level in Sm^{152}—109, 1014(L)
—— (see Goldhaber, M.)—109, 1015(L)
Gross, Bernhard. Thermovoltaic effect in γ-irradiated borosilicate glass—110, 337
Grundl, J. A., R. L. Henkel, and B. L. Perkins. $P^{31}(n,p)Si^{31}$ and $Al^{27}(n,\alpha)Na^{24}$ cross sections—109, 425
Gryzinski, Michał. Fusion chain reaction—111, 900
Günther, Marian. Two-quantum interaction energy correction for ground state of He atom—111, 182
Gupta, Suraj N. Effect of strange particles on magnetic moments of nucleons—111, 1436
—— Pion production in high-energy processes—111, 1698

Haag, R. Quantum field theories with composite particles and asymptotic conditions—112, 669
Haddock, Roy P. (see Macq, Pierre C.)—112, 2061
Hadley, T. H. (see Blosser, H. G.)—110, 531
Haeberli, Willy (see Block, Robert C.)—109, 1620
—— (see Olness, J. W.)—112, 1702

Hafner, E. M. Scattering of 220-Mev polarized protons by complex nuclei—**111**, 297
Hake, R. R., D. E. Mapother, and D. L. Decker. Isotope effect on superconducting transition in Pb—**112**, 1522
Halford, Donald, Clyde A. Hutchison, Jr., and Peter M. Llewellyn. Electron nuclear double resonance of Nd—**110**, 284(L)
Hall, W. S. (see Brolley, J. E., Jr.)—**109**, 1277
Haller, Kurt. Photoproduction of mesons in intermediate coupling—**111**, 1736
Halpern, Francis R. Convergence of method of moments—**111**, 1
—— Phonon-polaron problem—**109**, 1836
Halpern, I. (see Coffin, C. T.)—**112**, 536
Halpern, J. (see Whetstone, A.)—**109**, 2072
Ham, Frank S. (see Brooks, Harvey)—**112**, 344
Hamilton, D. R. (see Reynolds, J. B.)—**109**, 465
Hamilton, J. Pion scattering and dispersion relations—**110**, 1134
Hamilton, J. H., L. M. Langer, R. L. Robinson, and W. G. Smith. Shape of Pr^{143} β spectrum—**112**, 945
——, **L. M. Langer, and W. G. Smith.** Small deviations observed in β spectra: Na^{22}—**112**, 2010
—— (see Lazar, N. H.)—**110**, 513
Hamilton, Walter C. Neutron diffraction investigation of 119°K transition in magnetite—**110**, 1050
Hammer, C. L. and R. H. Good, Jr. Quantization process for massless particles—**111**, 342
Hanna, S. S. and R. S. Preston. Polarization of positrons and annihilation in ferromagnetic materials—**109**, 716
—— (see Frost, R. T.)—**110**, 939
—— (see Holland, R. E.)—**112**, 903
—— (see Preston, R. S.)—**110**, 1406
Hansen, Eldon R. (see Rasmussen, John O.)—**109**, 1656
Harbottle, G. (see Scharff-Goldhaber, G.)—**111**, 913; **112**, 2139(E)
Harding, R. S. Asymmetry measurement in scattering of 155-Mev neutrons by C, Al, Cu, Cd, and Pb—**111**, 1164
Harlow, M. V., Jr. (see Ranken, W. A.)—**112**, 239
Harman, George G. Electroluminescence from surface layer of $BaTiO_3$, $SrTiO_3$, and associated materials—**111**, 27
Harris, Joseph David. Green's functions for particles of arbitrary spin—**112**, 2124
Harrison, S. E., C. J. Kriessman, and S. R. Pollack. Magnetic spectra of Mn ferrites—**110**, 844
Harrison, Walter A. Cellular method for wave functions in imperfect metal lattices—**110**, 14
Hart, E. L. (see Sellen, J. M.)—**110**, 779(L)
Hart, H. R., Jr. (see Estle, T. L.)—**112**, 1576
Harte, W. E. (see Christy, R. W.)—**109**, 710
Harth, E. M. (see Slaughter, G. G.)—**109**, 2111
Hartree, D. R. Representation of exchange terms in Fock's equations by a quasi-potential—**109**, 840
Harvey, Fred E. (see Young, Otis B.)—**109**, 529
Harvey, John A. and D. J. Hughes. Spacings of nuclear energy levels—**109**, 471
Haskin, D. M. (see Teucher, M. W.)—**111**, 1384
Hass, M. (see Ferguson, G. A., Jr.)—**112**, 1130
Hastings, J. M. (see Donnay, G.)—**112**, 1917
Hatch, Albert J. and H. Bartel Williams. Multipacting modes of high-frequency gaseous breakdown—**112**, 681
Hatch, E. N. and D. E. Alburger. Lifetime of 473-kev level in Tm^{169}—**110**, 1116
Hatcher, Charles R. and W. E. Millett. Quenching of positronium lifetimes by molecular I_2—**112**, 1924
——, **W. E. Millett, and Louis Brown.** Annihilation of positrons in organic compounds—**111**, 12
Haxby, R. O. (see Tatro, C. A.)—**112**, 932
Hayward, E. (see Fuller, E. G.)—**109**, 630
Hayward, R. W. (see Ambler, E.)—**110**, 787(L)
Heckman, Harry H. (see Barkas, Walter H.)—**112**, 622
Heckrotte, Warren and Malcolm MacGregor. Neutrons from $p+d$ breakup reaction—**111**, 593
Heer, E., A. Roberts, and J. Tinlot. π^+-production in Al and C by 209-Mev polarized protons—**111**, 640
——, **A. Roberts, and J. Tinlot.** Search for evidence of parity nonconservation in π^+-meson production by polarized protons—**111**, 645
Heinberg, M., W. M. McClelland, F. Turkot, W. M. Woodward, R. R. Wilson, and D. M. Zipoy. Photoproduction of π^+ mesons from H in region 350–900 Mev—**110**, 1211(L)
Helmer, R. G. (see Cork, J. M.)—**110**, 526
Helmy, E., J. H. Mulvey, D. J. Prowse, and D. H. Stork. Example of production of π^- meson by K^+ meson—**112**, 1793
Hemmendinger, A. (see Diven, B. C.)—**109**, 144
Hemmer, P. Chr., L. C. Maximon, and H. Wergeland. Recurrence time of dynamical system—**111**, 689
Henkel, R. L. (see Grundl, J. A.)—**109**, 425
Henley, E. M. (see Blair, J. S.)—**112**, 2029
Henri, Victor P. and Anatole M. Shapiro. Evidence against reaction $K^+ \rightarrow \mu^+ + \mu^0$—**110**, 591(L)
Henry, R. W. (see Gove, N. B.)—**112**, 489
Henry, Warren E. Low-temperature magnetic studies of UH_3, UD_3, UO_2—**109**, 1976
—— Magnetization studies and possible magnetic structure of $BaO \cdot 6Fe_2O_3$—**112**, 326
Hensel, J. C. and W. C. Parkinson. Polarization of protons from $B^{10}(d,p)B^{11}$, $C^{12}(d,p)C^{13}$, and spin-flip stripping—**110**, 128
Henshaw, D. G. Atomic distribution in liquid and solid Ne and solid A by neutron diffraction—**111**, 1470
—— Structure of solid He by neutron diffraction—**109**, 328
Hensley, Eugene B. (see Reiling, Gilbert H.)—**112**, 1106
Herman, Frank (see Braunstein, Rubin)—**109**, 695
—— (see Ellis, S. G.)—**109**, 1860(L)
Herndon, R. C. (see Sekiguchi, T.)—**112**, 1
Hernqvist, K. G. Emission mechanism of cold-cathode arcs—**109**, 636
Herring, C., T. H. Geballe, and J. E. Kunzler. Phonon-drag thermomagnetic effects in n-type Ge. I. General survey—**111**, 36
Herring, D. F. Energy levels of F^{18}—**112**, 1217
——, **Ren Chiba, B. R. Gasten, and H. T. Richards.** $N^{14}(\alpha,\alpha)N^{14}$ and $N^{14}(\alpha,p)O^{17}$ differential cross sections—**112**, 1210
Hershinger, L. W. (see Daniel, P. J.)—**111**, 1240
Hersil, Juan (see Clark, George W.)—**110**, 1485(E)
Hester, R. E., R. E. Pixley, and W. A. S. Lamb. Radiative capture of protons in oxygen at 140 to 170 kev—**111**, 1604
Heydenburg, N. P. (see Pieper, G. F.)—**111**, 264
—— (see Temmer, G. M.)—**111**, 1303
Hickman, G. D. and W. L. Wiedenbeck. Directional correlation of γ rays in Gd^{154}—**111**, 539
Hickok, R. L., W. A. McKinley, and S. C. Fultz. Decay of Ce^{144} and Pr^{144}—**109**, 113
Hicks, H. G. (see Stevenson, P. C.)—**111**, 886
Hien, N. C. (see Lang, L. G.)—**110**, 1062
Hill, H. A. and J. M. Blair. Proton-γ ray angular correlations in $Si^{28}(d,p\gamma)Si^{29}$ reaction—**111**, 1142
Hill, R. D. (see Crew, J. E.)—**110**, 177
Hill, R. W. Angular distributions of elastic scattering of 5-Mev neutrons—**109**, 2105
Hillman, Peter, Arne Johansson, and Gunnar Tibell. Time-reversal invariance in nuclear scattering—**110**, 1218(L)
Hilton, H. H. (see Kohler, D.)—**110**, 1094
Hoff, R. W. and J. M. Hollander. Energy levels of Po^{210}—**109**, 447
Hoffman, D. C. and B. J. Dropesky. Electron-capture decay of Pu^{237}—**109**, 1282

Hoffman, John H. and Alfred O. Nier. Production of He in Fe meteorites by action of cosmic rays—**112**, 2112
Hoffman, R. (see Winckler, J. R.)—**110**, 1221
Hofstadter, Robert (see Burleson, George R.)—**112**, 1282
—— (see Ehrenberg, Hans F.)—**110**, 544
—— (see Yearian, M. R.)—**110**, 552; **111**, 934
Holcomb, D. F. Magnetic resonance line shapes at onset of saturation—**112**, 1599
Holladay, Wendell G. (see Thomas, Billy S.)—**110**, 981
Holland, R. E., Frank J. Lynch, and S. S. Hanna. Lifetimes of first excited states of F^{17} and B^{10}—**112**, 903
Hollander, J. M. (see Hoff, R. W.)—**109**, 447
Holm, D. M. (see Terrell, J.)—**109**, 2031
Holmgren, H. D. (see Butler, J. W.)—**112**, 461
—— (see Johnston, R. L.)—**109**, 884
Hon, John F. and P. J. Bray. Nuclear quadrupole coupling constants of Li^7 in Li compounds—**110**, 624
Hooke, W. M. (see Reynolds, J. B.)—**109**, 465
Hopfield, J. J. Theory of contribution of excitons to complex dielectric constant of crystals—**112**, 1555
Hoppes, D. D. (see Ambler, E.)—**110**, 787(L)
Horen, D. J. and W. E. Meyerhof. Decay of Cu^{68}—**111**, 559
Hornbostel, J., E. O. Salant, and G. T. Zorn. Yields of K^+ and K^- mesons produced by 1.7- to 3-Bev protons—**112**, 1311
—— **and G. T. Zorn.** Observation and analysis of K^- interactions—**109**, 165
Hoshino, S., K. Vedam, Y. Okaya, and R. Pepinsky. Dielectric and thermal study of $(NH_4)_2SO_4$ and $(NH_4)_2BeF_4$ transitions—**112**, 405
—— (see Pepinsky, R.)—**111**, 430; **111**, 1467; **111**, 1508
Hosler, W. R. (see Frederikse, H. P. R.)—**110**, 880
Howard, W. E. (see Goldberg, Colman)—**110**, 1035
Howe, H. A. (p,n) cross sections of Cu and Zn—**109**, 2083
Howland, L. P. Band structure and cohesive energy of KCl—**109**, 1927
Hrostowski, H. J. (see Shulman, R. G.)—**109**, 808
Huang, Kerson and F. E. Low. Decay of π meson and universal Fermi interaction—**109**, 1400(L)
Hubbard, P. S. Nuclear magnetic relaxation of three and four spin molecules in liquid—**109**, 1153; **111**, 1746(E)
Hubbs, J. C. and R. Marrus. Hfs measurements on Np^{239}—**110**, 287(L)
——, **R. Marrus, W. A. Nierenberg, and J. L. Worcester.** Hfs measurements on Pu^{239}—**109**, 390
——, **R. Marrus, and J. L. Worcester.** Nuclear spin of Ga^{68}—**110**, 534
—— (see Albridge, R. G.)—**111**, 1137
Hudis, J. and J. M. Miller. Be^7 nuclei as evaporated particles in high-energy reactions—**112**, 1322
—— (see Baker, E.)—**112**, 1319
—— (see Caretto, A. A.)—**110**, 1130
Hudson, R. P. (see Ambler, E.)—**110**, 787(L)
Hudspeth, Emmett L. (see Williamson, Claude F.)—**110**, 139
Huff, Robert W. Neutral vector meson and nucleon form factors and magnetic moments—**112**, 1021
Hughes, D. J. (see Eisenhauer, C. M.)—**109**, 1046
—— (see Fox, J. D.)—**110**, 1472(L)
—— (see Harvey, John A.)—**109**, 471
—— (see Seth, K. K.)—**110**, 692
Hughes, V. W. (see Drake, C. W.)—**112**, 1627
Huizenga, J. R. Correlation of competition between neutron emission and fission—**109**, 484
—— (see Gindler, J. E.)—**109**, 1263
—— (see White, F. A.)—**109**, 437
—— (see Wing, J.)—**111**, 590
Hull, G. W. (see Geballe, T. H.)—**110**, 773(L)
Hull, M. H., Jr., and J. Shapiro. Polarization in p-p scattering at 3 and 4 Mev—**109**, 846
Hurwitz, H., Jr. (see Auer, P. L.)—**111**, 1017
Hutchison, Clyde A., Jr. (see Halford, Donald)—**110**, 284(L)
Huzita, H. (see Baldo-Ceolin, M.)—**112**, 2118
Hwa, Rudolph C. Effects of electron-electron interactions on cyclotron resonances in gaseous plasmas—**110**, 307
Hylleraas, Egil A. and John Midtdal. Ground-state energy of two-electron atoms. Corrective results—**109**, 1013(L)

Iben, Icko, Jr. β-γ correlation and time-reversal invariance—**112**, 1240
—— Higher order effects in β decay of P^{32}—**109**, 2059
Ichikawa, Yoshi H. Characteristic energy loss of electrons in graphite—**109**, 653
Ignatenko, A. E. (see Gol'danskii, V. I.)—**109**, 1762
Igo, George, D. Geoffrey Ravenhall, Jerome J. Tiemann, Warren W. Chupp, Gerson Goldhaber, Sulamith Goldhaber, Joseph E. Lannutti, and Roy M. Thaler. Scattering of K^+ mesons in emulsion—**109**, 2133
Illsley, E. Geer (see Johnston, R. L.)—**109**, 884
Inchauspé, Nicolas (see Chiarotti, Gianfranco)—**109**, 345
Innes, F. R. and C. W. Ufford. Microwave Zeeman effect and theory of complex spectra—**111**, 194
Inuishi, Yoshio and Tokuo Suita. Dielectric breakdown of KCl crystals irradiated with γ rays—**109**, 1509
Ioffe, B. L. (see Berestetsky, V. B.)—**111**, 522
Ise, John, Jr. (see Anderson, Oscar A.)—**110**, 1375
Ishiguro, Eiichi. Electron-coupled interaction between nuclear spins in HD molecule—**111**, 203
Ishiguro, Masakazu and Etsu Sugioka. Color center in KCl containing Li^+ or Na^+—**110**, 1070
Ittner, William B. Superconducting to normal phase transition in Ta—**111**, 1483
Ivanova, N. S. (see Denisenko, G. F.)—**109**, 1779
Ivash, Eugene V. Dissociation of H_2 molecule ion by electron impact—**112**, 155
—— (see Richter, John L.)—**111**, 245
Iyengar, P. K. (see Brockhouse, B. N.)—**111**, 747

Jaccarino, V. (see Shulman, R. G.)—**109**, 1084
Jackson, H. E. (see DeWire, J. W.)—**110**, 1208(L)
Jackson, J. D. (see Frauenfelder, H.)—**110**, 451
Jacobs, J. A. (see Bashkin, S.)—**109**, 434
Jaffe, Hans (see Berlincourt, Don)—**111**, 143
Janis, Allen I. (see Bergmann, Peter G.)—**111**, 1191
Jansen, Laurens. Molecular theory of dielectric constant—**112**, 434
—— Tensor formalism for Coulomb interactions and asymptotic properties of multipole expansions—**110**, 661
Jarmie, Nelson and Robert C. Allen. $T(t,\alpha)n,n$ reaction—**111**, 1121
—— (see Allen, Robert C.)—**111**, 1129
Jarrett, H. S. and R. K. Waring. Ferrimagnetic resonance in $NiMnO_3$—**111**, 1223
Jastram, P. S. (see Gager, W. B.)—**111**, 803
Jeffries, C. D. (see Abraham, M.)—**112**, 553
Jehle, Herbert, Jerrold M. Yos, and William L. Bade. Specificity of charge fluctuation forces. I—**110**, 793
Jen, C. K., S. N. Foner, E. L. Cochran, and V. A. Bowers. Electron spin resonance of atomic and molecular free radicals trapped at liquid He temperature—**112**, 1169
Jennings, D. A., W. H. Tanttila, and O. Kraus. Ultrasonically induced spin transitions in NaI—**109**, 1059
Jennings, L. D. and C. A. Swenson. Effects of pressure on superconducting transition temperatures of Sn, In, Ta, Tl, and Hg—**112**, 31
Jensen, R. C. and A. W. Fairhall. Fission of Ra^{226} by 11-Mev protons—**109**, 942
Jentschke, W. K. (see Juveland, A. C.)—**110**, 456
—— (see Nilson, R.)—**109**, 850

Jesse, William P. Absolute energy to produce ion pair in various gases by β particles from S^{35}—**109**, 2002
Johansson, Arne (see Hillman, Peter)—**110**, 1218(L)
Johnson, C. H., A. Galonsky, and J. P. Ulrich. Proton strength functions from (p,n) cross sections—**109**, 1243
Johnson, E. O. Large-signal surface photovoltage studies with Ge—**111**, 153
Johnson, John L. (see Porter, William S.)—**111**, 1578
Johnson, Kenneth A. Consistency of quantum electrodynamics —**112**, 1367
—— (see Bernstein, Jeremy)—**109**, 189
Johnson, Noah R. (see Cumming, James B.)—**110**, 1104
Johnson, O. E., R. G. Johnson, and L. M. Langer. Small deviations observed in β spectra: In^{114}, Y^{90}, and P^{32}—**112**, 2004
Johnson, P. D. (see Piper, W. W.)—**110**, 323
Johnson, R. G. (see Johnson, O. E.)—**112**, 2004
Johnston, H. L. (see Chou, Chien)—**109**, 788
—— (see White, David)—**109**, 797
Johnston, L. H. and D. A. Swenson. p-p scattering at 40 Mev —**111**, 212
Johnston, R. L., H. D. Holmgren, E. A. Wolicki, and E. Geer Illsley. Differential cross sections for $C^{12}(He^3,p)N^{14}$ reaction —**109**, 884
Jones, C. M. (see Moak, C. D.)—**110**, 1369
Jones, K. W., L. J. Lidofsky, and J. L. Weil. $N^{15}(p,n)O^{15}$ reaction study—**112**, 1252
—— (see Weil, J. L.)—**110**, 466; **112**, 1975
Jopson, R. C. (see Chupp, E. L.)—**109**, 2036; **112**, 518; **112**, 532; **112**, 1183
Joseph, David W. Two-pair decay and spin of neutral pion—**112**, 2107
Joseph, P. J. (see Windham, P. M.)—**109**, 1193
Joyner, W. T. (see de Zafra, R. L.)—**112**, 19
Judd, David L. (see Cohen, Stanley)—**110**, 1471(L)
Jurić, Mira K. and Silva D. Ćirilov. Polarization of protons from $C^{13}(d,p)C^{13}$ reaction with deuterons of 1060 kev—**112**, 1224
Juveland, A. C. and W. Jentschke. Polarization of protons from (d,p) reactions on C^{12} and Si^{28}—**110**, 456

Kaiser, W., H. L. Frisch, and H. Reiss. Mechanism of formation of donor states in heat-treated Si—**112**, 1546
Kallmann, Hartmut and J. R. Freeman. Electric field distribution in polarized photoconductors—**109**, 1506
——, **Bernard Kramer, and Peter Mark.** De-excitation of ZnS and ZnCdS phosphors by electric fields—**109**, 721
—— **and Eugene Sucov.** Energy storage in ZnS and ZnCdS phosphors—**109**, 1473
—— (see Furst, M.)—**109**, 646
Kalogeropoulos, Theodor (see Goldhaber, Gerson)—**110**, 1474(L)
Kane, J. A. (see Fields, T. H.)—**109**, 1704; **109**, 1713
—— (see Stallwood, R. A.)—**109**, 1716
Kane, P. P. Scattering of 31.5-Mev positive pions from C—**112**, 1337
Kanzaki, Hiroshi. Dichroism of F and M bands in KCl—**110**, 1063
Känzig, Werner and Truman O. Woodruff. Electron spin resonances of H-centers—**109**, 220(L)
Kaplan, R. (see Kim, Y. W.)—**111**, 1468
Kaplan, Selig N., Burton J. Moyer, and Robert V. Pyle. Neutron emission following μ-meson capture in Ag and Pb—**112**, 968
—— (see Tai, Yuin-Kwei)—**109**, 2086
Kaplan, T. A. Approximate theory of ferrimagnetic spin waves —**109**, 782
Kaplon, M. F. (see Engler, A.)—**112**, 597
Karplus, Robert, Charles M. Sommerfield, and Eyvind H. Wichmann. Spectral representations in perturbation theory. I. Vertex function—**111**, 1187
—— (see Chew, Geoffrey F.)—**110**, 265
Karzas, W. J., W. K. R. Watson, and F. Zachariasen. Scattering of light by protons—**110**, 253
Kashy, E., P. D. Miller, and J. R. Risser. Energy levels in F^{18} from $N^{14}(\alpha,\alpha)N^{14}$ and $N^{14}(\alpha,p)O^{17}$ reactions—**112**, 547
Kasper, J. S. and R. M. Waterstrat. Antiferromagnetism in b.c.c. Mn-Cr solid solution—**109**, 1551
Kassner, James L., Jr. (see Fitz, H. C., Jr.)—**111**, 1406
Katcoff, Seymour. Decay of Tc^{97} ground state—**111**, 575
Katz, L. (see Rybka, T. W.)—**110**, 1123
Kaufman, A. N. (see Rosenbluth, M. N.)—**109**, 1
Kaufmann, A. R. (see Lin, S. T.)—**109**, 2218(E)
Kaus, Peter E. Theory of interstitial impurity states in semiconductors—**109**, 1944
Kavanagh, R. W. and C. A. Barnes. Boron plus deuteron reactions—**112**, 503
Kawaguchi, Masaaki. Polarization of proton from photodisintegration of deuteron—**111**, 1314
Keating, D. T., W. J. Neidhardt, and A. N. Goland. Neutron cross sections and scattering length of Cu^{63} and Cu^{65}—**111**, 261
Kedzie, R. W. (see Abraham, M.)—**112**, 553
Keesom, P. H. and N. Pearlman. Low-temperature heat capacity of pure and reduced rutile—**112**, 800
—— **and G. Seidel.** Superfluid He inside neutron-irradiated Si —**111**, 422
—— (see Seidel, G.)—**112**, 1083
Keffer, F. and W. O'Sullivan. Problem of spin arrangements in MnO and similar antiferromagnets—**110**, 1484(E)
Keller, Joseph B. Propagation of magnetic field into superconductor—**111**, 1497
Keller, Seymour P., I. L. Gelles, and W. V. Smith. Paramagnetic resonance absorption in Mn-activated hexagonal ZnS—**110**, 850
—— **and George D. Pettit.** Quenching, stimulation, and exhaustion studies on some infrared stimulable phosphors—**111**, 1533
—— (see Cheroff, George)—**111**, 98
Kellogg, P. J. (see Glassgold, A. E.)—**109**, 1291
Kelly, Martin (see Spruch, Larry)—**109**, 2144
Kendall, Henry W. Lifetime of 0^+ excited state inGe^{70} —**109**, 861
Kenney, V. P. (see Brunhart, G.)—**110**, 924
Kerman, R. O. (see Nilson, R.)—**109**, 850
Kern, Bernard D. and William E. Kreger. $Li^6(n,t)He^4$ cross section for 12.5- to 18.3-Mev neutrons—**112**, 926
—— (see Brunhart, G.)—**110**, 924
Kerth, Leroy T., Thaddeus F. Kycia, and Ludwig van Rossum. Total cross sections for 190-Mev positively charged K mesons in complex nuclei—**109**, 1784
Keyes, Robert W. Interpretation of magnetoconductivity in n-type Ge and Si—**111**, 34
—— Isotropic approximation to magnetoresistance of multivalley semiconductor—**109**, 43
Khubchandani, P. G., L. S. Kothari, and K. S. Singwi. Thermal inelastic scattering of cold neutrons in polycrystalline graphite. II—**110**, 70
Khuri, N. N. and S. B. Treiman. Dispersion relations for Dirac potential scattering—**109**, 198
Kikuchi, C. (see Makhov, G.)—**109**, 1399(L)
Kim, Y. W., R. Kaplan, and P. J. Bray. V-type center resonance of neutron-irradiated LiF at room temperature—**111**, 1468
King, D. T. Isotropy of pion emission at 6 Bev—**109**, 1344
King, J. C. Anelasticity of synthetic crystalline quartz at low temperatures—**109**, 1552
King, K. M. (see Tycko, D. H.)—**109**, 369

King, R. W. and J. F. Perkins. Inverse β decay and two-component neutrino—**112**, 963
Kinoshita, Toichiro. Commutation relation of different fields and TCP theorem—**110**, 978
Kirkwood, John G. (see Cowan, Robert D.)—**111**, 1460
Kistner, O. C. and B. M. Rustad. Decay of Ca^{39}—**112**, 1972
Kittel, C. Excitation of spin waves in ferromagnet by uniform rf field—**110**, 1295; **112**, 2139(E)
—— Interaction of spin waves and ultrasonic waves in ferromagnetic crystals—**110**, 836
Klarmann, J. (see Engler, A.)—**112**, 597
Klein, Abraham and Richard Prange. Perturbation theory for infinite medium of fermions—**112**, 994
—— (see Bludman, Sidney)—**109**, 550
—— (see Norton, Richard E.)—**109**, 584; **109**, 991
—— (see Prange, Richard)—**112**, 1008
Klein, Martin J. (see Glass, Solomon J.)—**109**, 288
Klein, Milton M. and Keith A. Brueckner. Interaction of slow electrons with atomic O and atomic N—**111**, 1115
Klema, Ernest D. Angular correlations of γ rays in cascade from levels in Lu^{175} and Hf^{177}—**109**, 1652
Klick, Clifford C. (see Compton, W. Dale)—**110**, 349; **112**, 1620
Knight, J. D., R. K. Smith, and B. Warren. $U^{238}(n,2n)U^{237}$ cross section from 6 to 10 Mev—**112**, 259
Knox, Kerro and Seymour Geller. Ferrimagnetic fluoride—$Na_3Fe_2F_{14}$—**110**, 771(L)
Knox, Robert S. Excited state wave functions, excitation energies, and oscillator strengths for $A(3p^54s)$—**110**, 375
Koch, H. W. (see Fano, U.)—**112**, 1679
—— (see Fuller, E. G.)—**109**, 630
Kocher, C. W. (see Mitchell, Allan C. G.)—**111**, 1343
Koehler, J. S. (see Magnuson, G. D.)—**109**, 1990
Koehler, W. C., E. O. Wollan, and M. K. Wilkinson. Paramagnetic and nuclear scattering cross sections of Ho_2O_3—**110**, 37
—— (see Wollan, E. O.)—**110**, 638; **112**, 1132
Koenig, Seymour H. Rate processes and low-temperature electrical conduction in n-type Ge—**110**, 986(L)
—— Recombination of thermal electrons in n-type Ge below 10°K—**110**, 988(L)
Koga, Isaac, Masanao Aruga, and Yōichirō Yoshinaka. Theory of plane elastic waves in piezoelectric crystalline medium and determination of elastic and piezoelectric constants of quartz—**109**, 1467
Kohler, D. and H. H. Hilton. Lifetime of 6.14-Mev 3^- state of O^{16} by recoil method—**110**, 1094
Kohler, Majorie M. (see Green, Louis C.)—**112**, 1187
Kohn, W. (see Luttinger, J. M.)—**109**, 1892
Kohn, Walter. Interaction of charged particles in dielectric—**110**, 857
Kolb, A. C. Magnetically confined plasmas—**112**, 291
—— **and H. Griem.** Theory of line broadening in multiplet spectra—**111**, 514
Kolchin, Eleanor K. (see Green, Louis C.)—**112**, 1187
Koller, N. Benczer, A. Schwarzschild, J. B. Vise, and C. S. Wu. Determination of electron polarization by electron-electron scattering: Y^{90} and Au^{198}—**109**, 85
Kolsrud, Marius. Variational methods for scattering problems—**112**, 1436
Komar, Arthur. Construction of complete set of independent observables in general theory of relativity—**111**, 1182
Kondo, J. (see Yamashita, J.)—**109**, 730
Konuma, Michiji, Seitaro Nakamura, and Hiroomi Umezawa. Conservation laws for lepton processes—**109**, 1404(L)
Kopp, J. K. (see Erwin, A. R., Jr.)—**109**, 1364
Koski, W. S. (see Cheever, G. D.)—**110**, 922
Koster, G. F. Matrix elements of symmetric operators—**109**, 227
Kothari, L. S. (see Khubchandani, P. G.)—**110**, 70
Kraichnan, Robert H. Irreversible statistical mechanics of incompressible hydromagnetic turbulence—**109**, 1407; **111**, 1747(E)
—— Statistical mechanics of coupled bosons in Heisenberg representation—**112**, 1054
—— Statistical mechanics of coupled particles in Schrödinger representation—**112**, 1056
Kramer, Bernard (see Kallmann, Hartmut)—**109**, 721
Kramers, H. C. (see Brewer, D. F.)—**110**, 282(L)
Kraus, O. and W. H. Tanttila. Nuclear magnetization in presence of ultrasonic excitation—**109**, 1052
—— (see Jennings, D. A.)—**109**, 1059
Kraybill, Henry L. (see Lea, Robert)—**110**, 748
Kreger, William E. (see Kern, Bernard D.)—**112**, 926
Kriessman, C. J. (see Harrison, S. E.)—**110**, 844
Krishnaji and G. P. Srivastava. Microwave absorption in methyl halides—**109**, 1560
Krohn, V. E. (see Burgy, M. T.)—**110**, 1214(L)
—— (see Raboy, S.)—**111**, 579
Krömer, Herbert. Proposed negative-mass microwave amplifier—**109**, 1856(L)
Kronsbein, John. Relativity in static spherical and elliptic space (Einstein's universe)—**109**, 1815
—— Relativity in stationary spherical or elliptic space—**112**, 1384
Krumhansl, J. A. (see Brown, E.)—**109**, 30
Kruse, Herald W. (see Reines, Frederick)—**109**, 609(L)
Kruse, T. H. and R. D. Bent. Search for electric monopole pairs from 7.6-Mev state of C^{12}—**112**, 931
—— (see Bent, R. D.)—**109**, 1240
Kunzler, J. E. (see Herring, C.)—**111**, 36
Kycia, Thaddeus F. (see Kerth, Leroy T.)—**109**, 1784
Kyhl, R. L. (see Davis, C. F.)—**111**, 1268
—— (see Strandberg, M. W. P.)—**109**, 1988

Laff, R. A. and H. Y. Fan. Magnetoresistance in n-type Ge at low temperatures—**112**, 317
Lamb, W. A. S. (see Hester, R. E.)—**111**, 1604
Lambe, J. (see Makhov, G.)—**109**, 1399(L)
Lambertson, Glen R. (see Coombes, Charles A.)—**112**, 1303
Landau, L. D. (see Abrikosov, A. A.)—**111**, 321
Lande, K. (see Bardon, M.)—**110**, 780(L)
Lander, R. (see Agnew, L.)—**110**, 994(L)
Landon, H. H., A. J. Elwyn, G. N. Glasoe, and S. Oleksa. Neutron scattering at 2.2 Mev by time of flight—**112**, 1192
—— (see Elwyn, A. J.)—**112**, 1200
Landovitz, Leon F. (see Durand, Loyal, III)—**112**, 273
Landsman, D. Z. (see Gregory, D. P.)—**109**, 2091
Lane, C. T. (see Walmsley, R. H.)—**112**, 1041
Lang, L. G. and N. C. Hien. Electron momentum distributions in single-crystal Cd—**110**, 1062
Langberg, Edwin. Analysis of low-energy sputtering—**111**, 91
Langer, L. M. (see Hamilton, J. H.)—**112**, 945; **112**, 2010
—— (see Johnson, O. E.)—**112**, 2004
—— (see Lazar, N. H.)—**110**, 513
—— (see Robinson, R. L.)—**109**, 1255; **112**, 481
Lannutti, Joseph E., Sulamith Goldhaber, Gerson Goldhaber, Warren W. Chupp, S. Giambuzzi, C. Marchi, G. Quareni, and A. Wataghin. Study of interaction of positive K mesons—**109**, 2121
—— (see Igo, George)—**109**, 2133
Larson, David C. (see Fletcher, John G.)—**111**, 455; **112**, 2139(E)
Larson, H. V. Energy loss per ion pair for protons in various gases—**112**, 1927
Larsson, K. E. (see Palevsky, Harry)—**112**, 11
Lasser, M. E. (see Daniel, P. J.)—**111**, 1240
LaTourrette, J. T. (see Quinn, W. E.)—**112**, 1929
Lauritsen, C. C. (see Cook, C. W.)—**111**, 567
Lauritsen, T. (see Cook, C. W.)—**111**, 567

Lawrence, T. R. (see Carleton, N. P.)—**109**, 1159
Lax, Benjamin (see Zwerdling, Solomon)—**109**, 2207(L)
Lax, Melvin. Generalized mobility theory—**109**, 1921
—— **and James C. Phillips.** One-dimensional impurity bands—**110**, 41
—— (see Levitas, Alfred)—**110**, 1016
—— (see Rosenberg, R.)—**112**, 843
Lazar, N. H., G. D. O'Kelley, J. H. Hamilton, L. M. Langer, and W. G. Smith. Nuclear structure of Zr^{90}—**110**, 513
Lea, Robert, Earle C. Fowler, and Henry L. Kraybill. Production of K mesons and hyperons in H by 1.95-Bev protons—**110**, 748
Le Blanc, James M. (see Coté, Robert E.)—**111**, 288
Lebowitz, Joel L. Modified virial theorem for total momentum fluctuations—**109**, 1464
LeCraw, R. C., E. G. Spencer, and C. S. Porter. Ferromagnetic resonance line width in yttrium iron garnet single crystals—**110**, 1311
Leder, Lewis B. and L. Marton. Temperature dependence of characteristic energy loss of electrons in Al—**112**, 341
Lederman, L. M. (see Bardon, M.)—**110**, 780(L)
—— (see Coffin, T.)—**109**, 973
Lee, Benjamin W. Dispersion relation for nonrelativistic potential scattering—**112**, 2122
Lee, L. L., Jr. (see Schiffer, J. P.)—**109**, 2098
—— (see Schiffer, J. P.)—**110**, 1216(L)
Lee, T. D. and C. N. Yang. Low-temperature behavior of dilute Bose system of hard spheres. I. Equilibrium properties—**112**, 1419
—— **and C. N. Yang.** Possible determination of spin of Λ^0 from its large decay angular asymmetry—**109**, 1755
—— (see Bernstein, J.)—**111**, 313
—— (see Goldhaber, M.)—**112**, 1796
Legvold, S. (see Anderson, G. S.)—**109**, 243; **111**, 1257
—— (see Behrendt, D. R.)—**109**, 1544
—— (see Rhodes, B. L.)—**109**, 1547
—— (see Thoburn, W. C.)—**110**, 1298; **112**, 56
Leider, H. R. Luminescence from x-ray colored KBr crystals during plastic deformation—**110**, 990(L)
Leigh, J. (see Freier, G. D.)—**110**, 446
Leipuner, L. B. and R. K. Adair. Production of strange particles by π^--p interactions near threshold—**109**, 1358
Leiss, J. E. and R. A. Schrack. Angular distribution in neutral meson decay—**109**, 1326
Leitner, Jack (see Blevins, M. E.)—**112**, 1287
—— (see Durand, Loyal, III)—**112**, 273
Leivo, William J. (see Bell, M. Drake)—**111**, 1227
—— (see Vaughan, W. H.)—**110**, 652
Lenard, A. and Ira B. Bernstein. Plasma oscillations with diffusion in velocity space—**112**, 1456
Levi Setti, R. and W. E. Slater. Observation of π^0-mesonic decay of He hypernucleus—**111**, 1395
Levin, J. S. (see Cranberg, L.)—**109**, 2063
Levine, Arnold D. Neutral mesons arising in photoproduction of pion pairs—**109**, 515
Levitas, Alfred and Melvin Lax. Statistics of Ising ferromagnet—**110**, 1016
Lewis, H. W. Fermi-Thomas model with correlations—**111**, 1554
—— (see Olness, J. W.)—**112**, 475; **112**, 1702
Lewis, M. and H. Margenau. Statistical broadening of spectral lines emitted by ions in plasma—**109**, 842
Lewis, Robert R. and R. B. Curtis. β-γ correlations with resonance fluorescence—**110**, 910
—— (see Bernstein, Jeremy)—**112**, 232
Lichten, William. New metastable state of Hg—**109**, 1191
Lichtenberg, D. B. and Marc Ross. K-meson contribution to forces between baryons—**109**, 2163
—— (see Ross, Marc)—**110**, 737
Lichtenstein, M. (see Cooper, C. Dewey)—**109**, 2026
Lidiard, A. B. Vacancy pairs in ionic crystals—**112**, 54
Lidofsky, L. J. (see Jones, K. W.)—**112**, 1252
Lieb, Elliott H. and Kazuo Yamazaki. Ground-state energy and effective mass of polaron—**111**, 728
Lifshitz, J. (see Vallarta, M. S.)—**109**, 1403(L)
Lin, S. T. and A. R. Kaufmann. Magnetic properties of UMn_2—**109**, 2218(E)
Lind, Edward L. (see Bube, Richard H.)—**110**, 1040
Lindenbaum, S. J. and R. M. Sternheimer. Application of spin-flip dispersion relations to Minami ambiguity for pion-nucleon scattering—**110**, 1174
—— **and Luke C. L. Yuan.** Total cross section of H for 143- to 205-Mev positive pions—**111**, 1380
—— (see Sternheimer, R. M.)—**109**, 1723
Lindenfeld, P. (see Garfinkel, M.)—**110**, 883
Lindner, C. N. (see Berg, R. A.)—**112**, 2072
Lindqvist, T. (see Page, L. A.)—**112**, 893
Lindsay, Robert and John J. Banewicz. Magnetic susceptibility of sintered rod of αMnS—**110**, 634
Lipkin, Harry J. Center-of-mass motion in Brueckner theory for finite nucleus—**109**, 2071
—— Center-of-mass motion in nuclear shell model—**110**, 1395
——, **S. Cuperman, T. Rothem, and A. de-Shalit.** Measurement of β-ray polarization of Au^{198} by double Coulomb scattering—**109**, 223(L)
Lipworth, Edgar (see Garvin, Hugh L.)—**111**, 534
Litherland, A. E. (see Gove, H. E.)—**111**, 608
Littauer, Raphael (see DeWire, J. W.)—**110**, 1208(L)
Livingston, Ralph (see Trammell, G. T.)—**110**, 630
Llewellyn, Peter M. (see Halford, Donald)—**110**, 284(L)
—— (see Low, W.)—**110**, 842
Lockwood, J. A. Variations in cosmic-ray nucleonic intensity—**112**, 1750
Loebner, E. E. (see Ellis, S. G.)—**109**, 1860(L)
Loferski, J. J. and P. Rappaport. Radiation damage in Ge and Si detected by carrier lifetime changes: damage thresholds—**111**, 432
Lohrmann, E. and M. W. Teucher. Production of strange particles and antiparticles in nuclear interactions of very high energy ($E \sim 10^{13}$ ev)—**112**, 587
Loinger, A. (see Bocchieri, P.)—**111**, 668
Lomont, J. S. Dirac-like wave equations for particles of zero rest mass and their quantization—**111**, 1710
Long, Donald and John Myers. Weak-field magnetoresistance in p-type Si—**109**, 1098
Lopes, J. Leite. Capture of negative muons by light nuclei—**109**, 509
Louck, J. D. New recursion relation for Clebsch-Gordan coefficients—**110**, 815
Low, F. E. Bremsstrahlung of very low-energy quanta in elementary particle collisions—**110**, 974
—— (see Huang, Kerson)—**109**, 1400(L)
Low, W. Paramagnetic and optical spectra of divalent Co in cubic crystalline fields—**109**, 256
—— Paramagnetic and optical spectra of divalent Ni in cubic crystalline fields—**109**, 247
—— Paramagnetic resonance spectrum of Gd^{3+} in cubic field of CaF_2—**109**, 265
—— **and P. M. Llewellyn.** Hfs of Tc^{99} from paramagnetic resonance—**110**, 842
—— (see Weger, M.)—**111**, 1526
Löwdin, Per-Olov (see Shull, Harrison)—**110**, 1466(L)
—— (see Freeman, A. J.)—**111**, 1212
Lowry, Ralph A. and Glenn H. Miller. Ionization yield of protons in N_2 and A—**109**, 826
Luborsky, F. E. Loss of exchange coupling in surface layers of ferromagnetic particles—**109**, 40
Lüders, Gerhart and Bruno Zumino. Connection between spin and statistics—**110**, 1450
Lurio, A. (see Drake, C. W.)—**112**, 1627

Luttinger, J. M. Theory of Hall effect in ferromagnetic substances—**112**, 739
—— **and W. Kohn.** Quantum theory of electrical transport phenomena—**109**, 1892
Lynch, Frank J. (see Holland, R. E.)—**112**, 903
Lynton, E. A. and B. Serin. Magnetization curves of superconductive Sn alloys—**112**, 70

MacDonald, William M. Coulomb corrections to Fermi nuclear matrix element—**110**, 1420
Macfarlane, G. G., T. P. McLean, J. E. Quarrington, and V. Roberts. Fine structure in absorption edge spectrum of Si—**111**, 1245
MacGregor, Malcolm H., William P. Ball, and Rex Booth. Neutron nonelastic cross sections at 21.0, 25.5, and 29.2 Mev—**111**, 1155
—— **and Rex Booth.** Neutron nonelastic cross-section measurements on C—**112**, 486
—— (see Ball, William P.)—**110**, 1392
—— (see Booth, Rex)—**112**, 226
—— (see Heckrotte, Warren)—**111**, 593
—— (see Noyes, H. Pierre)—**111**, 223
Mack, J. E. Structure of Ba resonance line—**109**, 820
MacKenzie, D. R. (see Geiger, J. S.)—**112**, 1684
Mackliet, C. A. Diffusion of Fe, Co, and Ni in single crystals of pure Cu—**109**, 1964
Macklin, R. L. and J. H. Gibbons. Study of $T(p,n)He^3$ and $Li^7(p,n)Be^7$ reactions—**109**, 105
Macq, Pierre C., Kenneth M. Crowe, and Roy P. Haddock. Helicity of electron and positron in muon decay—**112**, 2061
Madansky, Leon (see Cheever, G. D.)—**110**, 922
Madden, H. H. and H. E. Farnsworth. High-vacuum studies of surface recombination velocity for Ge—**112**, 793
Madey, Richard (see Bandtel, Kenneth C.)—**109**, 2117
Magid, L. (see Braunstein, R.)—**111**, 480
Magnuson, G. D., W. Palmer, and J. S. Koehler. Isothermal annealing below 60°K of deuteron-irradiated noble metals—**109**, 1990
Mahaffey, D. W., G. McCullagh, and K. G. Emeleus. Beam-plasma interaction—**112**, 1052
Makhov, G., C. Kikuchi, J. Lambe, and R. W. Terhune. Maser action in ruby—**109**, 1399(L)
Malik, S. S. and Ambuj Mukerji. Radiations of Os^{185}—**111**, 1291
——, **N. Nath, and C. E. Mandeville.** Decay of Gd^{159}—**112**, 262
—— (see Dubey, V. S.)—**111**, 920; **112**, 2139(E)
—— (see Mukerji, Ambuj)—**111**, 1319
Malmberg, J. H. and C. S. Robinson. Small-angle photoproduction of positive pions from H—**109**, 158
Malvano, R. (see Farinelli, U.)—**112**, 1994
Mandel, M. (see Barrett, A. H.)—**109**, 1572
Mandelstam, S. Determination of pion-nucleon scattering amplitude from dispersion relations and unitarity. General theory—**112**, 1344
Mandeville, C. E. (see Dubey, V. S.)—**111**, 920; **112**, 2139(E)
—— (see Malik, S. S.)—**112**, 262
—— (see Porter, W. C.)—**112**, 468
Manelli, I. (see Eisler, F.)—**112**, 979
Mann, A. K. (see Bernstein, A. M.)—**110**, 805
Mapleton, Robert A. Simultaneous ionization and excitation of He by protons—**109**, 1166
Mapother, D. E. (see Cochran, John F.)—**111**, 132
—— (see Decker, D. L.)—**112**, 1888
—— (see Hake, R. R.)—**112**, 1522
March, N. H. Kinetic and potential energies of electron gas—**110**, 604
—— (see Donovan, B.)—**110**, 582(L)
—— (see Gilvarry, J. J.)—**112**, 140
—— (see Young, W. H.)—**109**, 1854
March, R. (see Fischer, J.)—**109**, 533
Marchi, C. (see Lannutti, Joseph E.)—**109**, 2121
Margenau, Henry. Conductivity of plasmas to microwaves—**109**, 6
—— (see Desloge, Edward A.)—**112**, 1437
—— (see Lewis, M.)—**109**, 842
Margolis, B. (see Franklin, J.)—**109**, 525; **111**, 296
—— (see Rae, E. R.)—**112**, 492
Marino, Lawrence L., Wesley B. Ewbank, William A. Nierenberg, Howard A. Shugart, and Henry B. Silsbee. Spins of In^{109}, In^{110m}, and In^{111}—**111**, 286
Mark, Hans (see Chupp, E. L.)—**109**, 2036; **112**, 518; **112**, 532; **112**, 1183
Mark, Peter (see Kallmann, Hartmut)—**109**, 721
Markowitz, Samuel S., F. S. Rowland, and G. Friedlander. (p,pn) reactions at proton energies from 0.3 to 3.0 Bev—**112**, 1295
Marple, D. T. F. (see Piper, W. W.)—**110**, 323
Marrus, R. (see Albridge, R. G.)—**111**, 1137
—— (see Hubbs, J. C.)—**109**, 390; **110**, 287(L); **110**, 534
Marshak, H. and V. L. Sailor. Low-energy neutron resonances in Sm^{149}—**109**, 1219
Marshak, R. E. (see de Swart, J. J.)—**111**, 272
—— (see Okubo, S.)—**112**, 665
—— (see Signell, P. S.)—**109**, 1229
—— (see Sudarshan, E. C. G.)—**109**, 1860(L)
Marshall, J. F. (see Shatas, R. A.)—**109**, 1953
Marshall, L. (see Fischer, J.)—**109**, 533
Marshall, W. Orientation of nuclei in ferromagnets—**110**, 1280
Martegani, A. (see Vervier, J. F.)—**109**, 947
Martin, H. J. (see McEllistrem, M. T.)—**111**, 1636
Martin, P. C. and R. J. Glauber. Relativistic theory of radiative orbital electron capture—**109**, 1307
Marton, L., J. Arol Simpson, J. A. Suddeth, M. D. Wagner, and Hiroshi Watanabe. Effect of degree of orientation and crystal size on scattering of 20-kev electrons by Al—**110**, 1057
—— (see Leder, Lewis B.)—**112**, 341
Mason, Conrad J. (see Barkas, Walter H.)—**112**, 622
Mason, E. A., H. W. Schamp, Jr., and J. T. Vanderslice. Interaction energy and mobility of Li^+ ions in He—**112**, 445
Matossi, Frank and Frank Stern. Temperature dependence of optical absorption in p-type InAs—**111**, 472
Matsushima, Satoshi (see Green, Louis C.)—**112**, 1187
Matthews, P. T. and Abdus Salam. K-meson dispersion relations. I. Theory—**110**, 565
—— **and Abdus Salam.** K-meson dispersion relations. II. Applications—**110**, 569
—— **and Abdus Salam.** Relativistic field theory of unstable particles—**112**, 283
—— (see Feldman, Gordon)—**109**, 546
Matthias, B. T. and R. M. Bozorth. Ferromagnetism of Zr-Zn compound—**109**, 604(L)
——, **E. Corenzwit, and W. H. Zachariasen.** Superconductivity and ferromagnetism in isomorphous compounds—**112**, 89
Matthysse, Steven W. (see Desloge, Edward A.)—**112**, 1437
Mattis, Daniel Charles and J. Bardeen. Theory of anomalous skin effect in normal and superconducting metals—**111**, 412
—— **and G. Dresselhaus.** Anomalous skin effect in magnetic field—**111**, 403
Maximon, L. C. (see Hemmer, P. Chr.)—**111**, 689
—— (see Olsen, Haakon)—**110**, 589(L)
Mayo, S. and S. J. Nassiff. γ rays of Rh^{106} (130±2 min)—**111**, 1140
Mazari, M., W. W. Buechner, and A. Sperduto. Excited states of V^{51} and Cr^{53}—**112**, 1692
—— (see de Figueiredo, R. P.)—**112**, 873
Mazo, R. M. and A. C. Zemach. Diffraction of neutrons by imperfect gases—**109**, 1564
McAvoy, Nelson (see Autler, S. H.)—**110**, 280(L)

McClelland, W. M. (see Heinberg, M.)—110, 1211(L)
McClure, J. W. Analysis of multicarrier galvanomagnetic data for graphite—112, 715
—— (see Anderson, J. D.)—111, 572
—— (see Nakada, M. P.)—110, 594(L)
McCombie, C. W. (see Elcock, E. W.)—109, 605(L)
McCracken, K. G. and N. R. Parsons. Unusual cosmic-ray intensity fluctuations observed at southern stations during October 21st–24th, 1957—112, 1798
McCrary, J. H. (see Ranken, W. A.)—109, 1646
McCrary, J. M. (see Ranken, W. A.)—109, 917
McCullagh, G. (see Mahaffey, D. W.)—112, 1052
McCutchen, C. W. Drift velocity of electrons in Hg vapor and Hg vapor-CO_2 mixtures—112, 1848
—— Excited states of Dy^{161}—109, 1211
McDiarmid, I. B. Nuclear interactions of high-energy μ-mesons in C—109, 1792
McDonald, Frank B. Primary cosmic-ray proton and alpha flux near geomagnetic equator—109, 1367
McElhinney, John (see Bendel, Warren L.)—111, 1297
—— (see Tobin, R.)—110, 1388
—— (see Toms, M. Elaine)—111, 561
McEllistrem, M. T. Analysis of $C^{12}+d$ reactions—111, 596
——, **H. J. Martin, D. W. Miller, and M. B. Sampson.** (d,p) reactions in Pb isotopes and their interpretation—111, 1636
McGinnis, Carl L. Radioactivity of In^{120} and Sb^{120}—109, 888
McGowan, F. K. and P. H. Stelson. Yields, angular distributions, and polarization of γ rays from Coulomb excitation—109, 901
—— (see Stelson, P. H.)—110, 489
McGruer, J. N. (see Vogelsang, W. F.)—109, 1663
McIntyre, John A. and George R. Burleson. Electron scattering from deuteron and neutron-proton potential—112, 2077
McKeown, M. (see Scharff-Goldhaber, G.)—111, 913; 112, 2139(E)
McKinley, W. A. (see Hickok, R. L.)—109, 113
McLean, T. P. (see Macfarlane, G. G.)—111, 1245
McLennan, James A., Jr. Improper Lorentz transformations—109, 986
McManus, H. and R. M. Thaler. Scattering of nucleons from nuclei at high energies—110, 590(L)
McMillan, W. G. Approximate compressibilities of elements on statistical model—111, 479
—— (see Griggs, D. T.)—109, 1858(L)
McMurray, W. R. (see Whitehead, C.)—110, 941
McVoy, Kirk W. Circular polarization of bremsstrahlung from polarized electrons in Born approximation—110, 1484(E)
—— Longitudinal polarization of bremsstrahlung and pair production—111, 1333
McWhorter, Alan L. and James W. Meyer. Solid-state maser amplifier—109, 312
Mead, C. A. Quantum theory of refractive index—110, 359
—— Theory of radiative damping in stationary states—112, 1843
Meadows, J. W. Angular distribution of fragments from fission of U^{238} and Th^{232} by 45-, 80-, and 155-Mev protons—110, 1109
Meads, R. E. (see Thornton, D. E. J.)—109, 480
Meckler, Alvin. Majorana formula—111, 1447
Meggers, William F. (see Fred, Mark)—111, 1747(E)
Meissner, Hans. Measurements on superconducting contacts—109, 686
—— Paramagnetic effect in superconductors. V. Resistance transition of Sn wires—109, 668
—— Paramagnetic effect in superconductors. VII. Shape of superconducting domains—109, 1479
—— **and Richard Zdanis.** Paramagnetic effect in superconductors. VI. Resistance transitions in In wires—109, 681
Melissinos, Adrian C. (see Sagalyn, Paul L.)—109, 375
Menardi, S. (see Farinelli, U.)—112, 1994
Menes, M. and D. I. Bolef. Observation of nuclear resonance acoustic absorption of In^{115} in InSb—109, 218(L)
Menyuk, Norman and Kirby Dwight. Low-temperature transition of magnetic anisotropy in Ni-Fe ferrite—112, 397
Merrill, John J. and Jesse W. M. DuMond. Precision measurement of L x-ray spectra of U and Pu—110, 79
Merz, W. J. (see Ellis, S. G.)—109, 1860(L)
Messel, H. (see Butcher, J. C.)—112, 2096
Metropolis, N., R. Bivins, M. Storm, J. M. Miller, G. Friedlander, and A. Turkevich. Monte Carlo calculations on intranuclear cascades. II. High-energy studies and pion processes—110, 204
——, **R. Bivins, M. Storm, Anthony Turkevich, J. M. Miller, and G. Friedlander.** Monte Carlo calculations on intranuclear cascades. I. Low-energy studies—110, 185
Metzger, Franz R. Nuclear resonance fluorescence in As^{75}—110, 123
——, **C. P. Swann, and V. K. Rasmussen.** Lifetime of first excited state of B^{11}—110, 906
—— (see Rasmussen, V. K.)—110, 154
Meyer, H. J. G. Infrared absorption by conduction electrons in Ge—112, 298
Meyer, James W. (see McWhorter, Alan L.)—109, 312
Meyer, L. and F. Reif. Mobilities of He ions in liquid He—110, 279(L)
Meyerhof, W. E. and L. F. Chase, Jr. Levels of Be^{10} and B^{10}—111, 1348
—— (see Horen, D. J.)—111, 559
Meyerhofer, D. Transition to ferroelectric state in $BaTiO_3$—112, 413
Michael, E. D. (see Griggs, D. T.)—109, 1858(L)
Middlemas, N. (see Whitehead, C.)—110, 941
Midtdal, John (see Hylleraas, Egil A.)—109, 1013(L)
Millburn, George P. (see Tai, Yuin-Kwei)—109, 2086
Miller, Dan W. 1.7-Mev state in Be^9—109, 1669
—— (see McEllistrem, M. T.)—111, 1635
Miller, Glenn H. (see Lowry, Ralph A.)—109, 826
Miller, J. M. (see Hudis, J.)—112, 1322
—— (see Metropolis, N.)—110, 185; 110, 204
Miller, Philip D. and G. C. Phillips. Scattering of He^3 from He^4 and states in Be^7—112, 2048
—— **and G. C. Phillips.** Scattering of protons from He and level parameters in Li^6—112, 2043
—— (see Kashy, E.)—112, 547
Miller, Robert C. Some experiments on motion of 180° domain walls in $BaTiO_3$—111, 736
—— **and Albert Savage.** Velocity of sidewise 180° domain wall motion in $BaTiO_3$ as function of applied electric field—112, 755
Millett, W. E. (see Hatcher, Charles R.)—111, 12; 112, 1924
Mills, R. L. (see Schuch, A. F.)—110, 775(L)
—— (see Sessler, A. M.)—110, 1453
Milton, J. C. D. and J. S. Fraser. Spontaneous fission fragment velocity measurements and coincident γ spectra for Cf^{252}—111, 877
Mitchell, Allan C. G., Charles B. Creager, and C. W. Kocher. Disintegration of La^{135} and confirmatory experiments on Nd^{147}—111, 1343
Mitsui, Toshio. Theory of ferroelectric effect in Rochelle salt—111, 1259
Mizushima, Masataka. Theory of Stark effect of NO molecule—109, 1557; 111, 1746(E)
Moak, C. D., A. Galonsky, R. L. Traughber, and C. M. Jones. Energy levels of Be^9, C^{12}, and C^{13}—110, 1369
Moe, David E. and Otto H. Petsch. Energy spectrum of electrons emitted from gases bombarded by positive ions—110, 1358
Moe, Mildred and David S. Saxon. Variational methods in scattering problems—111, 950

Moffet, A. T. (see Boley, F. I.)—**110**, 915
Moll, J. L. (see Senitzky, B.)—**110**, 612
Montgomery, D. J. (see Snyder, D. D.)—**109**, 222(L)
Moore, Arnold R. (see Braunstein, Rubin)—**109**, 695
Moore, James A. Resonance scattering of slow neutrons on In—**109**, 417
Moore, M. S. (see Reich, C. W.)—**111**, 929
Moore, R. G. (see Williamson, Claude F.)—**110**, 139
Moran, Thomas I. and W. W. Watson. Thermal diffusion factors for noble gases—**109**, 1184
—— **and W. W. Watson.** Thermal diffusion factors from column operation—**111**, 380
Moravcsik, Michael J. Charge independence and low-energy parameters in pion physics—**111**, 1657
Morgan, Daniel F., Jr. (see Callaway, Joseph)—**112**, 334
Morgan, I. L. (see Williamson, Claude F.)—**110**, 139
Mori, Hazime. Statistical-mechanical theory of transport in fluids—**112**, 1829
—— Time-correlation functions in statistical mechanics of transport processes—**111**, 694
—— **and John Ross.** Transport equation in quantum gases—**109**, 1877; **112**, 2139(E)
Morita, Masato and Reiko Saito Morita. First forbidden transitions in parity-nonconserving β decay—**109**, 2048
—— **and R. S. Morita.** Possible experiments for determination of β interactions. II—**111**, 1130
—— **and R. S. Morita.** Time-reversal invariance and β-γ angular correlation. II—**110**, 461
——, **R. S. Morita, and M. Yamada.** Possible experiments for determination of β interactions. I—**111**, 237
Morita, Reiko Saito (see Morita, Masato)—**109**, 2048; **110**, 461; **111**, 237; **111**, 1130
Morpurgo, G. Inhibition of $M1$ γ transitions with $\Delta T=0$ in self-conjugate nuclei—**110**, 721
Morris, R. G., R. D. Redin, and G. C. Danielson. Semiconducting properties of Mg_2Si single crystals—**109**, 1909
—— (see Redin, R. D.)—**109**, 1916
Morse, R. W., H. V. Bohm, and J. D. Gavenda. Electron resonances with ultrasonic waves in Cu—**109**, 1394(L)
Moshinsky, Marcos. Velocity-dependent forces and nuclear structure. II. Spin-dependent forces—**109**, 933
Moszkowski, S. A. Connection between nuclear shell model and unified model—**110**, 403
—— (see Gallagher, C. J., Jr.)—**111**, 1282
Motley, R. W. (see Panofsky, W. K. H.)—**109**, 1353
Mottelson, B. R. (see Bohr, A.)—**110**, 936
Motz, J. W. and R. C. Placious. Bremsstrahlung cross-section measurements for 50-kev electrons—**109**, 235
—— **and R. C. Placious.** Polarization near high-frequency limit of 500-kev bremsstrahlung—**112**, 1039
—— (see Fano, U.)—**112**, 1679
Moyer, Burton J. (see Bandtel, Kenneth C.)—**110**, 1484(E)
—— (see Kaplan, Selig N.)—**112**, 968
—— (see Tai, Yuin-Kwei)—**109**, 2086
Mozley, R. F., R. C. Smith, and R. E. Taylor. Multiple scattering of 600-Mev electrons in thin foils—**111**, 647
Muchnik, M. (see Castagnoli, C.)—**112**, 1779
Mukerji, Ambuj, V. S. Dubey, and S. S. Malik. Radiation of Co^{55}—**111**, 1319
—— (see Dubey, V. S.)—**111**, 920; **112**, 2139(E)
—— (see Malik, S. S.)—**111**, 1291
Mukherji, A. and T. P. Das. F^{19} hyperfine interaction in paramagnetic resonance spectrum of Mn^{++} ions in ZnF_2—**111**, 1479
Mukhin, A. I. (see Gol'danskii, V. I.)—**109**, 1762
Mullin, C. J. (see Ford, G. W.)—**110**, 520; **110**, 1485(E)
Mulvey, J. H. (see Helmy, E.)—**112**, 1793
Murakawa, Kiyoshi. Quadrupole moments of As^{75}, La^{139}, and Hg^{201}—**110**, 393
Murty, G. S. and R. K. Varma. Acceleration of cosmic radiation—**112**, 1789
Myers, John (see Long, Donald)—**109**, 1098

Nakada, M. P., J. D. Anderson, C. C. Gardner, J. McClure, and C. Wong. Neutron spectrum from $p+d$ reaction—**110**, 594(L)
——, **J. D. Anderson, C. C. Gardner, and C. Wong.** Elastic scattering of 14-Mev neutrons from Be and C—**110**, 1439
—— (see Anderson, J. D.)—**110**, 160; **111**, 572
Nakamura, Seitaro (see Konuma, Michiji)—**109**, 1404(L)
Nambu, Y. (see Fubini, S.)—**111**, 329
Nash, C. P. (see Griggs, D. T.)—**109**, 1858(L)
Nash, F. R. (see Giordmaine, J. A.)—**109**, 302
Nassiff, S. J. (see Mayo, S.)—**111**, 1140
Natali, S. (see Baldo-Ceolin, M.)—**112**, 2118
Nath, N. (see Malik, S. S.)—**112**, 262
Nauenberg, Michael. Calculation of anomalous magnetic moments of Λ^0 and Σ^0, Σ^+, Σ^- hyperons—**109**, 2177
—— (see Brout, R.)—**112**, 1451
Naumann, R. A. (see Fisher, P. S.)—**112**, 1717
Neamtan, S. M. Depolarization of positron beam by multiple scattering—**110**, 173
Need, John L. (see Goodman, Charles D.)—**110**, 676
Neelakantan, K. A. (see Appa Rao, M. V. K.)—**110**, 751
Neher, H. V. and Hugh Anderson. Cosmic-ray changes from 1954 to 1957—**109**, 608(L)
Neidhardt, W. J. (see Keating, D. T.)—**111**, 261
Neighbours, J. R. and G. A. Alers. Elastic constants of Ag and Au—**111**, 707
Neiler, J. H. (see Good, W. M.)—**109**, 926
Nervik, W. E. (see Stevenson, P. C.)—**111**, 886
Nesbet, R. K. Axial symmetry of nuclear wave functions—**109**, 1017(L)
—— Brueckner's theory and method of superposition of configurations—**109**, 1632
—— **and R. E. Watson.** Approximate wave functions for ground state of He—**110**, 1073
Nethaway, D. R. and A. A. Caretto, Jr. New isotope, S^{38}—**109**, 504
—— (see Stevenson, P. C.)—**111**, 886
Nethercot, A. H., Jr. (see Rosenblum, B.)—**109**, 400
Newkirk, J. B. Method for detection of dislocations in Si by x-ray extinction contrast—**110**, 1465(L)
Newkirk, L. L. (see Ashby, V. J.)—**111**, 616
Newman, R. Optical properties of n-type InP—**111**, 1518
Newson, Henry W. (see Block, Robert C.)—**109**, 1620
Newton, Roger G. Electron scattering by polarized nuclei—**109**, 2213(L); **110**, 1483(E)
—— **and James H. Scofield.** Spin-orbit contributions in low-energy n-p triplet potentials—**110**, 785(L)
Neynaber, Roy H. (see Brackmann, R. T.)—**112**, 1157
Nicklas, James P. and Charles E. Treanor. Hartree-Fock functions and spectral isotope shift for excited states of C and O—**110**, 370
Nickols, Norris A. (see Barkas, Walter H.)—**112**, 622
Nicodemus, D. B. (see Coon, J. H.)—**111**, 250
Nielsen, J. W. (see Bozorth, R. M.)—**110**, 879
Nier, Alfred O. (see Hoffman, John H.)—**112**, 2112
Nierenberg, William A., Howard A. Shugart, Henry B. Silsbee, and R. J. Sunderland. Hfs separations and magnetic moments of Cs^{127}, Cs^{129}, Cs^{130}, and Cs^{132}—**112**, 186
—— (see Ewbank, W. B.)—**110**, 595(L)
—— (see Hubbs, J. C.)—**109**, 390
—— (see Marino, Lawrence L.)—**111**, 286
Nigam, B. P. and M. K. Sundaresan. Doublet separation in nuclei from Signell-Marshak potential—**111**, 284
Nilson, R., W. K. Jentschke, G. R. Briggs, R. O. Kerman, and J. N. Snyder. Investigation of excited states in Be^8 by α-particle scattering from He—**109**, 850

Nishijima, K. Formulation of field theories of composite particles—111, 995
Nishimura, Keiichi. Polarization of nucleons elastically scattered by nuclei—110, 1166
Nomura, K. C. and J. S. Blakemore. Decay of excess carriers in semiconductors—112, 1607
Nordling, Carl (see Sokolowski, Evelyn)—110, 776(L)
Norton, Richard E. and Abraham Klein. Complete set of dispersion relations for class of fixed-source meson theories 109, 584
—— **and Abraham Klein.** Significance of redundant solutions of Low-Wick equation—109, 991
—— **and W. K. R. Watson.** Consequences of pseudovector pion-nucleon coupling and universal β-decay—110, 996(L)
Norwood, M. H. and C. V. Briscoe. Elastic constants of KI and KCl—112, 45
Novey, T. B. (see Burgy, M. T.)—110, 1214(L)
Novick, Robert and Eugene D. Commins. Hfs of metastable of singly ionized He^3—111, 822
Novikova, N. R. (see Denisenko, G. F.)—109, 1779
Nowick, A. S. Effect of plastic deformation on γ-ray coloration of NaCl crystals—111, 16
—— (see Bron, W. E.)—111, 26
—— (see Feder, R.)—109, 1959
Noyes, H. Pierre. Alternative method for determining pion-nucleon forward scattering amplitude—111, 944
—— **and Malcolm MacGregor.** Analysis of 40-Mev p-p scattering—111, 223
—— (see Chew, Geoffrey F.)—109, 566
Nozières, Philippe. Cyclotron resonance in graphite—109, 1510
—— **and David Pines.** Correlation energy of free electron gas—111, 442
—— **and David Pines.** Electron interaction in solids. Collective approach to dielectric constant—109, 762
—— **and David Pines.** Electron interaction in solids. General formulation—109, 741
—— **and David Pines.** Electron interaction in solids. Nature of elementary excitations—109, 1062
—— **and David Pines.** Ground state energy and stopping power of electron gas—109, 1009(L)
—— (see Boyle, W. S.)—111, 782

Obenshain, Felix E. and Lorne A. Page. Detection of $\boldsymbol{\sigma}\cdot\mathbf{E}$ energy shift in positronium formed from polarized positrons—112, 179
Oberthal, H. (see Franklin, J.)—111, 296
Oehme, Reinhard. Vertex function in quantized field theories—111, 1430
—— (see Bremermann, H. J.)—109, 2178
Ofer, S. (see Alburger, D. E.)—112, 1998
Oguchi, Takehiko. Anisotropy energy in MnF_2 at low temperatures—111, 1063
Ohnuma, Shoroku. Nucleon-nucleon interactions and polarization of high-energy protons elastically scattered from C—111, 1173
Okamoto, K. Intrinsic quadrupole moment and resonance width of photonuclear reactions—110, 143
Okaya, Y. (see Hoshino, S.)—112, 405
—— (see Pepinsky, R.)—110, 1309; 111, 430; 111, 1467; 111, 1508
O'Kelley, G. D. (see Lazar, N. H.)—110, 513
Okkerse, Boudewijn (see Gonser, Ulrich)—109, 663
Okubo, Susumu. Decay of Σ^+ hyperon and its antiparticle—109, 984
——, **R. E. Marshak, E. C. G. Sudarshan, W. B. Teutsch, and S. Weinberg.** Interaction current in strangeness-violating decays—112, 665
Oleksa, Sophie. Neutron scattering cross section of U^{233}—109, 1645
—— (see Elwyn, A. J.)—112, 1200
—— (see Landon, H. H.)—112, 1192
Olness, J. W., W. Haeberli, and H. W. Lewis. Levels of Cl^{33} from $S^{32}(p,p)S^{32}$ and $S^{32}(p,p'\gamma)S^{32}$—112, 1702
——, **J. Vorona, and H. W. Lewis.** Elastic and inelastic scattering of protons by N^{14}—112, 475
Olsen, Haakon and L. C. Maximon. Electron and photon polarization in bremsstrahlung and pair production—110, 589(L)
Orbach, R. Linear antiferromagnetic chain with anisotropic coupling—112, 309
Osborn, R. K. (see Rose, M. E.)—110, 1484(E)
O'Sullivan, W. (see Keffer, F.)—110, 1484(E)
Oswald, L. (see Agnew, L.)—110, 994(L)
Otnes, K. (see Palevsky, Harry)—112, 11
Overhauser, A. W. and H. Rüchardt. Inversion symmetry of M and R centers—112, 722
—— (see Dick, B. G., Jr.)—112, 90
Owen, George E. (see Ames, Oakes)—109, 1639
Oxley, C. L. Scattering of 25–87 Mev photons by protons—110, 733

Page, Lorne A. Annihilation method for measuring transverse polarization of energetic positrons——109, 2215(L)
——, **B.-G. Pettersson, and T. Lindqvist.** Measurements on v/c-dependence of β-circularly polarized γ correlation in Co^{60} using magnetic-lens spectrometer—112, 893
—— (see Obenshain, Felix E.)—112, 179
Pais, A. Note on relations between baryon-meson coupling constants—110, 1480(L)
—— Relative parity of charged and neutral K-particles—112, 624
—— Symmetries of strong interactions—110, 574
—— **and S. B. Treiman.** Polarization effects in Σ^- capture—109, 1759
Pal, Yash (see Boldt, Elihu)—112, 1746
Palevsky, Harry, K. Otnes, and K. E. Larsson. Excitation of rotons in He II by cold neutrons—112, 11
—— (see Eisenhauer, C. M.)—109, 1046
—— (see Fox, J. D.)—110, 1472(L)
Palfrey, T. R. (see Tatro, C. A.)—112, 932
Palmer, W. (see Magnuson, G. D.)—109, 1990
Panofsky, W. K. H. and E. A. Allton. Form factor of photopion matrix element at resonance—110, 1155
——, **V. L. Fitch, R. W. Motley, and W. G. Chesnut.** Measurement of total absorption coefficient of long-lived neutral K-particles—109, 1353
Paolini, F. R. (see Bertozzi, W.)—110, 790(L)
Paris, C. H. (see Endt, P. M.)—110, 89
Parker, E. N. Cosmic-ray modulation by solar wind—110, 1445
—— Dynamical instability in anisotropic ionized gas of low density—109, 1874
—— Origin and dynamics of cosmic rays—109, 1328
—— Reaction of laboratory magnetic fields against their current coils—109, 1440
—— Suprathermal particles. III. Electrons—112, 1429
—— **and D. A. Tidman.** Suprathermal particles—111, 1206
—— **and D. A. Tidman.** Suprathermal particles. II—112, 1048
Parkinson, W. C. Ground state doublet of P^{32}—110, 485
—— (see Hensel, J. C.)—110, 128
Parsons, N. R. (see McCracken, K. G.)—112, 1798
Patterson, David A. Absorption spectrum of KCl:Tl at low temperatures—112, 296
—— (see Etzel, H. W.)—112, 1112
Paul, David I. Nonequilibrium phonon distributions in metals—111, 1086
Payne, Herbert. Fermi-Thomas method for crystals—111, 418
Pearlman, N. (see Keesom, P. H.)—112, 800
Pearson, C. (see Butler, S. T.)—112, 1227

Pearson, W. B. and I. M. Templeton. Superconducting transition of Pb—**109**, 1094
Peierls, Ronald F. Phenomenological analysis of production of pion pairs—**111**, 1373
Pekeris, C. L. Ground state of two-electron atoms—**112**, 1649
Pelah, I. (see Eisenhauer, C. M.)—**109**, 1046
Pen'kina, V. S. (see Gol'danskii, V. I.)—**109**, 1762
Penman, S. (see Coffin, T.)—**109**, 973
Penning, P. Coefficient for self-diffusion determined from rate of precipitation of Cu in Ge—**110**, 586(L)
Pensak, L. High-voltage photovoltaic effect—**109**, 601(L)
Pepinsky, R., K. Vedam, S. Hoshino, and Y. Okaya. Ammonium hydrogen sulfate: new ferroelectric with low coercive field—**111**, 1508
——, **K. Vedam, S. Hoshino, and Y. Okaya.** Ferroelectricity in di-glycine nitrate, $(NH_2CH_2COOH)_2 \cdot HNO_3$—**111**, 430
——, **K. Vedam, and Y. Okaya.** New room-temperature ferroelectric—**110**, 1309
——, **K. Vedam, Y. Okaya, and S. Hoshino.** Room-temperature ferroelectricity in lithium hydrazinium sulfate, $Li(N_2H_5)SO_4$—**111**, 1467
—— (see Hoshino, S.)—**112**, 405
Percus, Jerome K. and George J. Yevick. Analysis of classical statistical mechanics by means of collective coordinates—**110**, 1
Perfilov, N. A. (see Denisenko, G. F.)—**109**, 1779
Peria, W. T. Optical absorption and photoconductivity in MgO crystals—**112**, 423
Perkins, B. L. (see Grundl, J. A.)—**109**, 425
Perkins, J. F. (see King, R. W.)—**112**, 963
Perlman, M. L., J. P. Welker, and M. Wolfsberg. *K*-capture-positron ratios for first-forbidden transitions: Sb^{122}, Rb^{84}, I^{126}, As^{74}—**110**, 381
Perlmutter, A. (see Barcus, L. C.)—**111**, 167
Peter, Martin. Penetration of electromagnetic fields through superconducting films—**109**, 1857(L)
Peters, B. (see Appa Rao, M. V. K.)—**110**, 751
Peterson, J. M. (see Bratenahl, A.)—**110**, 927
Peterson, L. (see Winckler, J. R.)—**110**, 1221
Petree, B. (see Fuller, E. G.)—**112**, 554
Petritz, Richard L. Theory of experiment for measuring mobility and density of carriers in space charge region of semiconductor surface—**110**, 1263
—— (see Zemel, Jay N.)—**110**, 1263
Petsch, Otto H. (see Moe, David E.)—**110**, 1358
Pettersson, B.-G. (see Gerholm, T. R.)—**110**, 1119
—— (see Page, L. A.)—**112**, 893
Pettit, George D. (see Keller, Seymour P.)—**111**, 1533
Pettus, William G. Polarization of electrons scattered by thin Au foils—**109**, 1458
Phelps, A. V. Effect of imprisonment of resonance radiation on excitation experiments—**110**, 1362
Philipp, Herbert R. Intrinsic optical absorption in single-crystal SiC—**111**, 440
—— (see Taft, E. A.)—**110**, 876
Phillips, G. C. (see Miller, Philip D.)—**112**, 2043; **112**, 2048
Phillips, James C. Energy-band interpolation scheme based on pseudopotential—**112**, 685
—— (see Lax, Melvin)—**110**, 41
Phillips, W. R. Radiative capture of α-particles to states of O^{18} and F^{18}—**110**, 1408; **111**, 1747(E)
Piddington, J. H. Interplanetary magnetic field and its control of cosmic-ray variations—**112**, 589
Pieper, G. F. and N. P. Heydenburg. Reaction mechanism in $F^{19}(\alpha,p)Ne^{22}$ at 6 Mev—**111**, 264
Pines, David. Superconductivity in periodic system—**109**, 280
—— (see Bohr, A.)—**110**, 936
—— (see Nozières, Philippe)—**109**, 741; **109**, 762; **109**, 1009(L); **109**, 1062; **111**, 442
Pinkston, William T. and James G. Brennan. Single configuration analysis of Li^6—**109**, 499
Piper, W. W., D. T. F. Marple, and P. D. Johnson. Optical properties of hexagonal ZnS single crystals—**110**, 323
Pipkin, Francis M. Radio-frequency orientation of Sb^{122}—**112**, 935
—— **and J. W. Culvahouse.** Rf orientation of As^{76}—**109**, 1423
—— (see Culvahouse, J. W.)—**109**, 319
Pixley, R. E. (see Hester, R. E.)—**111**, 1604
Placious, R. C. (see Motz, J. W.)—**109**, 235; **112**, 1039
Plano, R. (see Eisler, F.)—**110**, 226; **112**, 979
Plaskett, John S. (see Berko, Stephan)—**112**, 1877
Pleasonton, Frances (see Snell, Arthur H.)—**111**, 1338
Poindexter, Edward and A. A. Giardini. Elastic constants of $SrTiO_3$—**110**, 1069
Pollack, S. R. (see Harrison, S. E.)—**110**, 844
Pollak, Michael. Piezoresistance in heavily doped *n*-type Ge—**111**, 798
Pomeranchuk, I. Y. (see Abrikosov, A. A.)—**111**, 321
Pomerantz, M. A., S. P. Agarwal, and V. R. Potnis. Direct observation of periodic variation of primary cosmic-ray intensity—**109**, 224(L)
—— (see Shatas, R. A.)—**109**, 1953
Porile, Norbert T. New Ge isotope, Ge^{65}—**112**, 1954
—— **and Nathan Sugarman.** Recoil studies of high-energy fission of Bi and Ta—**111**, 1746(E)
Porter, C. S. (see LeCraw, R. C.)—**110**, 1311
Porter, Charles E. Nitrogen-nitrogen elastic scattering—**112**, 1722
—— (see Blumberg, Sydel)—**110**, 786(L)
Porter, W. C., D. M. Van Patter, M. A. Rothman, and C. E. Mandeville. Levels in Cr^{50}, Cr^{52}, Cr^{53}, and Cr^{54}—**112**, 468
Porter, William S., Benjamin Roth, and John L. Johnson. Theory of reactions $H^3(d,n)He^4$ and $He^3(d,p)He^4$—**111**, 1578
Potnis, V. R. (see Pomerantz, M. A.)—**109**, 224(L)
Powell, C. J., J. L. Robins, and J. B. Swan. Effects of contamination on characteristic loss spectrum of W—**110**, 657
Powell, W. (see Agnew, L.)—**110**, 994(L)
Pradhan, Trilochan. Plasma oscillations in steady magnetic field—**109**, 2218(E)
Prange, Richard E. Dispersion relations for Compton scattering—**110**, 240
—— **and Abraham Klein.** Generalized reaction matrix approach to theory of infinite medium of fermions—**112**, 1008
—— (see Klein, Abraham)—**112**, 994
Pratt, R. H. Time-reversal invariance and radiative μ decay—**111**, 649
Pratt, W. W. (see Cochran, R. G.)—**109**, 878
Preston, R. S. and S. S. Hanna. Polarization of positrons from Ga^{66}, Ga^{68}, P^{29}, and Al^{25}—**110**, 1406
—— (see Hanna, S. S.)—**109**, 716
Primak, William. Fast-neutron-induced changes in quartz and vitreous silica—**110**, 1240
—— Radiation-induced changes of dimensions, index of refraction, and dispersion of LiF—**112**, 1075
Primakoff, H. (see Bernstein, J.)—**111**, 313
Proctor, W. G. (see Abragam, A.)—**109**, 1441
Prodell, A. (see Eisler, F.)—**112**, 979
Prokoffieva, E. I. (see Denisenko, G. F.)—**109**, 1779
Prosser, F. W., Jr., and L. C. Biedenharn. Some properties of shift and penetration factors in nuclear reactions—**109**, 413
Prowse, D. J. (see Helmy, E.)—**112**, 1793
Pugh, E. W. and F. M. Ryan. Magnetic susceptibility of Cu-Ni and Ag-Pd alloys at low temperatures—**111**, 1038
Pugh, Emerson M. (see Beitel, Frank P., Jr.)—**112**, 1516
—— (see Foner, Simon)—**109**, 1129
Pugh, Robert E. Furry's theorem for very strong interactions—**109**, 989

Pyle, Robert V. (see Anderson, Oscar A.)—**109**, 612(L); **110**, 1375
—— (see Kaplan, Selig N.)—**112**, 968

Quareni, G. (see Lannutti, Joseph E.)—**109**, 2121
Quarrington, J. E. (see Macfarlane, G. G.)—**111**, 1245
Quimby, S. L. (see Weisberg, Leonard R.)—**110**, 338
Quinn, John J. and Richard A. Ferrell. Electron self-energy approach to correlation in degenerate electron gas—**112**, 812
Quinn, W. E., J. M. Baker, J. T. LaTourrette, and N. F. Ramsey. Radio-frequency spectra of HD in strong magnetic fields—**112**, 1929

Rabinowitz, P. (see Dostrovsky, I.)—**111**, 1659
Raboy, S. and V. E. Krohn. Gyromagnetic ratio of 3.5×10^{-9}-sec state and other angular correlation measurements of Tc^{99}—**111**, 579
Rabson, T. A. (see Ranken, W. A.)—**109**, 917; **112**, 239
Raçzka, A. and R. Raçzka. Møller scattering of arbitrarily polarized electrons—**110**, 1469(L)
Raçzka, R. (see Raçzka, A.)—**110**, 1469(L)
Radicella, R. (see Bosch, H.)—**111**, 898
Rae, E. R., B. Margolis, and E. S. Troubetzkoy. Compound nucleus processes for reaction $U^{235}+n$—**112**, 492
Rainwater, J. (see Baker, W. F.)—**112**, 1763; **112**, 1773
Ramsey, Norman F. Molecular beam resonances in oscillatory fields of nonuniform amplitudes and phases—**109**, 822
—— Time reversal, charge conjugation, magnetic pole conjugation, and parity—**109**, 225(L)
—— (see Quinn, W. E.)—**112**, 1929
Ranken, W. A., T. W. Bonner, R. Castillo-Bahena, M. V. Harlow, Jr., and T. A. Rabson. γ radiation from $Al^{27}+p$ and $F^{19}+p$—**112**, 239
——, **T. W. Bonner, and J. H. McCrary.** Energy dependence of $F^{19}+p$ reactions—**109**, 1646
——, **T. W. Bonner, J. M. McCrary, and T. A. Rabson.** γ radiation from $N^{14}+d$ and $C^{13}+d$—**109**, 917
Rappaport, P. (see Loferski, J. J.)—**111**, 432
Rarita, William and Philip Schwed. Minimum theorem for interaction radius in two-body collisions—**112**, 271
Rasmussen, John O. and Eldon R. Hansen. Numerical solutions of Cm^{242} α-decay wave equation—**109**, 1656
—— (see Chasman, R. R.)—**112**, 512
—— (see Gallagher, C. J., Jr.)—**112**, 1730
—— (see Shirley, Virginia S.)—**109**, 2092
—— (see Toth, Kenneth S.)—**109**, 121
Rasmussen, V. K., F. R. Metzger, and C. P. Swann. Lifetimes of 4.43-Mev excited state of C^{12} and 4.46-Mev excited state of B^{11}—**110**, 154
—— (see Metzger, F. R.)—**110**, 906
Rassey, A. J. Nucleonic binding states in nonspherical nuclei: asymptotic representation—**109**, 949
Ravenhall, D. Geoffrey (see Igo, George)—**109**, 2133
Rawitscher, George H. Scattering of polarized μ mesons from extended nuclei—**112**, 1274
Rayne, John A. Elastic constants of α-brasses. Room-temperature variation with solute concentration—**112**, 1125
—— Heat capacity of Cu-Ge alloys below 4.2°K—**110**, 606
Redin, R. D., R. G. Morris, and G. C. Danielson. Semiconducting properties of Mg_2Ge single crystals—**109**, 1916
—— (see Morris, R. G.)—**109**, 1909
Redlich, Martin G. Similarity between shell model and deformed nucleus wave functions—**110**, 468
Redmond, P. J. Elimination of ghosts in propagators—**112**, 1404
Reich, C. W. and M. S. Moore. Multilevel formula for fission process—**111**, 929
Reif, F. (see Meyer, L.)—**110**, 279(L)
Reiling, Gilbert H. and Eugene B. Hensley. Fundamental optical absorption in MgO—**112**, 1106
Reines, Frederick, Clyde L. Cowan, Jr., and Herald W. Kruse. Conservation of number of nucleons—**109**, 609(L)
Reiss, H. (see Kaiser, W.)—**112**, 1546
Reitmann, D., H. Schneider, and I. J. van Heerden. L_I, L_{II}, L_{III}, and M internal conversion lines of the 411.8-kev transition in Hg^{198}—**110**, 1093
Reitz, J. R. (see Tomasch, W. J.)—**111**, 757
Remler, E. A. (see Fischer, G. E.)—**110**, 286(L)
Rempel, Robert C. Relaxation effects for coupled nuclear spins—**109**, 831
Reyes, P. (see Bosch, H.)—**111**, 898
Reynolds, H. K. (see Barnett, C. F.)—**109**, 355
Reynolds, H. L. (see Goldberg, E.)—**112**, 1981
Reynolds, J. B., R. L. Christensen, D. R. Hamilton, W. M. Hooke, and H. H. Stroke. Spins of certain short-lived Cu and Ag isotopes—**109**, 465
Rhodes, B. L., S. Legvold, and F. H. Spedding. Magnetic properties of Ho and Tm metals—**109**, 1547
Rhodes, Jacob L. and W. E. Stephens. Photoprotons from N^{15}—**110**, 1415
Rice, Stuart A. Dynamical theory of diffusion in crystals—**112**, 804
Richards, H. T. (see Herring, D. F.)—**112**, 1210
Richter, John L. and Eugene V. Ivash. Calculation of $O^{16}(d,p)O^{17}$ angular distribution—**111**, 245
Rickayzen, G. Meissner effect and gauge invariance—**111**, 817
Riddell, Robert J., Jr. (see Cohen, Stanley)—**110**, 1471(L)
Ringo, G. R. (see Burgy, M. T.)—**110**, 1214(L)
Risser, J. R. (see Kashy, E.)—**112**, 547
Roberts, A. (see Heer, E.)—**111**, 640; **111**, 645
Roberts, V. (see Macfarlane, G. G.)—**111**, 1245
Robins, J. L. (see Powell, C. J.)—**110**, 657
Robinson, C. S. (see Malmberg, J. H.)—**109**, 158
Robinson, Kenneth W. Radiation effects in circular electron accelerators—**111**, 373
Robinson, R. L. and L. M. Langer. β decay of Ru^{103}—**109**, 1255
—— **and L. M. Langer.** Inner β spectra of Ag^{111} and Rb^{86}—**112**, 481
—— (see Hamilton, J. H.)—**112**, 945
Rockmore, Ronald M. and John G. Taylor. Internal pairs in capture of π^- by protons—**112**, 992
Rodberg, Leonard S. Energy shifts in Feynman formalism—**110**, 277
Rodriquez, Sergio. Magnetic field dependence of ultrasonic attenuation in metals at low temperatures—**112**, 80
—— Theory of cyclotron resonance in metals—**112**, 1616
Roganov, V. S. (see Baranov, P. S.)—**109**, 1801
Rogers, K. C. (see Stein, P. C.)—**110**, 1209(L)
Rose, H. J. (see Warburton, E. K.)—**109**, 1199
Rose, M. E. and R. K. Osborn. Pseudoscalar interaction and β spectrum of RaE—**110**, 1484(E)
—— (see Church, E. L.)—**109**, 1299
—— (see Green, T. A.)—**110**, 105
Rose, P. H. (see Beghian, L. E.)—**110**, 1479(L)
Rosen, L. (see Brolley, J. E., Jr.)—**109**, 1277
Rosen, Nathan. Energy and momentum of cylindrical gravitational waves—**110**, 291(L)
Rosen, Philip. Ionization cross section of A-A collisions near threshold—**109**, 351
—— Low-energy inelastic atomic collisions—**109**, 348
Rosenberg, R. and Melvin Lax. Free-carrier absorption in n-type Ge—**112**, 843
Rosenblum, B., A. H. Nethercot, Jr., and C. H. Townes. Isotopic mass ratios, magnetic moments, and sign of electric dipole moment in CO—**109**, 400
Rosenbluth, M. N. and A. N. Kaufman. Plasma diffusion in magnetic field—**109**, 1
Rosenson, Lawrence. Momentum spectrum of positrons from decay of μ^+ mesons—**109**, 958

Rosenstock, Herbert B. Vibrations of one-dimensional ionic lattice—111, 755
Ross, John (see Mori, Hazime)—109, 1877; 112, 2139(E)
Ross, Marc. Pion-hyperon scattering and K^--p reactions—112, 986
—— **and D. B. Lichtenberg.** Λ-nucleon potential from hyperfragment data—110, 737
—— (see Lichtenberg, D. B.)—109, 2163
Rotenberg, Manuel and Lawrence Wilets. Variational wave function for nuclear matter—110, 1126
Roth, Benjamin (see Porter, William S.)—111, 1578
Roth, Laura M., (see Zwerdling, Solomon)—109, 2207(L)
Roth, W. L. Magnetic structures of MnO, FeO, CoO, and NiO—110, 1333
—— Multispin axis structures for antiferromagnets—111, 772
Rothem, T. (see Lipkin, H. J.)—109, 223(L)
Rothman, M. A. (see Porter, W. C.)—112, 468
Rourke, F. M. (see White, F. A.)—109, 437
Rowland, F. S. and R. L. Wolfgang. Production of He^6 by high-energy protons—110, 175
—— (see Markowitz, Samuel S.)—112, 1295
Ruark, Arthur E. (see Fitz, H. C.)—111, 1406
Rubin, Allen G. (see Cohen, Bernard L.)—111, 1568
Rubinow, S. I. (see Sartori, L.)—112, 214
Ruby, S. L., F. D. Schupp, and E. D. Wolley. Effect of monoenergetic fast neutrons on n-type Ge—111, 1493
Rüchardt, H. (see Overhauser, A. W.)—112, 722
Ruderman, M. A. (see Gasiorowicz, S.)—110, 261
Rudik, A. P. (see Berestetsky, V. B.)—111, 522
Rupprecht, G. Measurement of Ge surface states by pulsed channel effect—111, 75
Russek, Arnold. Collective motion in modified shell model—109, 487
—— **and M. Tom Thomas.** Ionization produced by atomic collisions at kev energies—109, 2015
Russell, Allan M. Magnetic moments due to rotation in Li^6F and Li^7F—111, 1558
Rustad, B. M. (see Kistner, O. C.)—112, 1972
Ryan, F. M. (see Pugh, E. W.)—111, 1038
Rybka, T. W. and L. Katz. Photoneutron reactions in Li—110, 1123

Šachl, Vladimír. Elastic scattering of electrons by He and H atoms in ground quantum states—110, 891
Sachs, A. M., H. Winick, and B. A. Wooten. Interactions of 38- and 61-Mev positive pions in deuterium—109, 1733
——, **H. Winick, and B. A. Wooten.** Scattering of 37-Mev positive pions on H—109, 1750
—— (see Coffin, T.)—109, 973
Sachs, R. and P. G. Bergmann. Structure of particles in linearized gravitational theory—112, 674
Sachs, R. G. (see Fry, W. F.)—109, 2212(L)
Sagalyn, Paul L., Adrian C. Melissinos, and Francis Bitter. Separation and identification of overlapping hfs components: application to Hg resonance radiation—109, 375
Sagar, A. Piezoresistance in n-type GaAs—112, 1533
Sah, Chih-Tang and W. Shockley. Electron-hole recombination statistics in semiconductors through flaws with many charge conditions—109, 1103
Sailor, V. L. (see Marshak, H.)—109, 1219
—— (see Shore, F. J.)—112, 191
Sakurai, J. J. $K_{\mu 3}$ decay: tests for time reversal and two-component theory—109, 980
Salam, Abdus (see Matthews, P. T.)—110, 565; 110, 569; 112, 283
Salant, E. O. (see Hornbostel, J.)—112, 1311
Salecker, H. and E. P. Wigner. Quantum limitations of measurement of space-time distances—109, 571
Salkovitz, E. I. (see Schindler, A. I.)—111, 1746(E)
Salpeter, E. E. Some atomic effects of electronic dipole moment—112, 1642
Salzman, George (see Schnitzer, Howard J.)—112, 1802
Samios, N. (see Eisler, F.)—110, 226; 112, 979
Sampson, M. B. (see McEllistrem, M. T.)—111, 1636
Sandweiss, Jack (see Goldhaber, Gerson)—110, 1476(L)
Saplakoglu, A., L. M. Bollinger, and R. E. Coté. Properties of s-wave and p-wave neutron resonances in Nb—109, 1258
Saporoschenko, Mykola. Ions in nitrogen—111, 1550
Sapp, R. C. (see Dempesy, C. W.)—110, 327; 110, 332
Sargent, C. P. (see Bertozzi, W.)—110, 790(L)
Sarles, L. R. and R. M. Cotts. Double nuclear magnetic resonance and dipole interaction in solids—111, 853
Sartori, L. and S. I. Rubinow. Scattering of low-energy neutrons by deuterons—112, 214
Satchler, G. R. Angular distribution of nuclear reaction products—111, 1747(E)
—— Nuclear potential and symmetry energy—109, 429
Sato, Hiroshi. Remarks on volume magnetostriction and anisotropic forced magnetostriction—109, 802
Savage, Albert (see Miller, Robert C.)—112, 755
Sawada, K. (see Brueckner, K. A.)—112, 328
Sawamoto, Kenichi (see Yamaka, Eiso)—112, 1861
Sawicki, J. (see Czyż, W.)—110, 900
Sawyer, R. F. Charge properties of K-meson and hyperon decay interaction—112, 2135
Saxon, David S. (see Moe, Mildred)—111, 950
Scales, William W. Specific heat of LiF and KI at low temperatures—112, 49
Scanlon, Wayne W. Intrinsic optical absorption and radiative recombination lifetime in PbS—109, 47
—— (see Allgaier, Robert S.)—111, 1029
Scarf, Frederick L. Discrete states for singular potential problems—109, 2170
—— New soluble energy band problem—112, 1137
—— Scattering amplitudes for Thirring model—111, 1433
—— **and H. Umezawa.** Admissible solutions of covariant two-body problem—109, 1848
Schafroth, M. R. Remarks on Meissner effect—111, 72
Schamp, H. W., Jr. (see Mason, E. A.)—112, 445
Scharenberg, R. P. (see Beghian, L. E.)—110, 1479(L)
—— (see Goldring, G.)—110, 701
Scharff-Goldhaber, G., D. E. Alburger, G. Harbottle, and M. McKeown. Studies of decay schemes in Os-Ir region. I. Isomers Os^{190m} (10 min) and Os^{189m} (5.7 hr)—111, 913; 112, 2139(E)
Schawlow, A. L. Penetration of magnetic fields through superconducting films—109, 1856(L)
—— **and G. E. Devlin.** Intermediate state of superconductors. II. Influence of crystal structure—110, 1011
—— **and C. H. Townes.** Infrared and optical masers—112, 1940
Schein, Marcel (see Teucher, M. W.)—111, 1384
Schiffer, J. P. and L. L. Lee, Jr. Proton strength functions from (p,n) reaction cross sections—109, 2098
——, **L. L. Lee, Jr., J. L. Yntema, and B. Zeidman.** Single-particle interpretation of proton spectra from (d,p) reactions—110, 1216(L)
Schindewolf, U. Mass assignments of 23-sec Pd^{107m} and 4.8-min Pd^{109m}; search for <3-sec Pd^{105m}—109, 1280
—— (see Alexander, J. M.)—111, 228
Schindler, A. I., R. J. Smith, and E. I. Salkovitz. Electrical resistivity of Ni-Pd alloy system between 300°K and 730°K—111, 1746(E)
Schneider, H. (see Reitmann, D.)—110, 1093
Schneps, J. π^+-mesonic decay of hyperfragment—112, 1335
—— (see Chesick, Elizabeth B.)—112, 1810
Schnitzer, Howard J. and George Salzman. Discrepancy between π^--proton scattering and dispersion equation—112, 1802

Schopper, H. (see Appel, H.)—**109**, 2211(L)
Schrack, R. A. (see Leiss, J. E.)—**109**, 1326
Schuch, A. F., E. R. Grilly, and R. L. Mills. Structure of α and β forms of solid He^3—**110**, 775(L)
Schultz, H. L. (see Draper, J. E.)—**111**, 906
Schulz, G. J. Measurement of atomic and molecular excitation by trapped-electron method—**112**, 150
Schumacher, Robert T. Dynamics of interacting spin system—**112**, 837
Schuman, R. P. (see White, F. A.)—**109**, 437
Schupp, F. D. (see Ruby, S. L.)—**111**, 1493
Schwartz, C. L. (see Drell, S. D.)—**112**, 568
Schwartz, M. (see Eisler, F.)—**110**, 226; **112**, 979
Schwarz, Ruth F. (see Brill, Patricia H.)—**112**, 330
—— (see Daniel, P. J.)—**111**, 1240
Schwarzschild, A. (see Koller, N. Benczer)—**109**, 85
Schwed, Philip (see Rarita, William)—**112**, 271
Schweizer, Felix. Half-life of K^{37}—**110**, 1414
Scofield, James H. (see Newton, Roger G.)—**110**, 785(L)
Scott, Mary Jean. Polarization measurements in p-α elastic scattering—**110**, 1398
Seaborg, Glenn T. (see Vandenbosch, Robert)—**110**, 507; **111**, 1358
Segal, I. E. Direct formulation of causality requirements on S operator—**109**, 2191
Segel, R. E. γ-ray decay in Hg^{200}—**111**, 1620
Segrè, E. (see Agnew, L.)—**110**, 994(L)
Seidel, G. and P. H. Keesom. Specific heat of Ga and Zn in normal and superconducting states—**112**, 1083
—— (see Keesom, P. H.)—**111**, 422
Seidlitz, L., E. Bleuler, and D. J. Tendam. Elastic and inelastic scattering of 18-Mev α particles from Ne, A, and Xe—**110**, 682
Sekiguchi, T. and R. C. Herndon. Thermal conductivity of electron gas in gaseous plasma—**112**, 1
—— (see Goldstein, L.)—**109**, 625
Sellen, J. M., G. Cocconi, V. T. Cocconi, and E. L. Hart. Cross sections for double and triple meson production in H by photons with energies up to 1 Bev—**110**, 779(L)
Selove, W. and J. M. Teem. Measurements of interaction of 95-Mev protons with He^4—**112**, 1658
Senitzky, B. and J. L. Moll. Breakdown in Si—**110**, 612
Senitzky, I. R. Induced and spontaneous emission in coherent field—**111**, 3
Serin, B. (see Lynton, E. A.)—**112**, 70
Sessler, A. M. and H. M. Foley. Hfs of deuterium and nucleon-nucleon spin-orbit potentials—**110**, 995(L)
—— **and R. L. Mills.** Nucleon size contributions to hfs of H and He—**110**, 1453
Seth, K. K., D. J. Hughes, R. L. Zimmerman, and R. C. Garth. Nuclear radii by scattering of low-energy neutrons—**110**, 692
Shakin, Carl and Joseph Birman. Electronic energy bands in ZnS: preliminary results—**109**, 818
Shamov, V. P. (see Denisenko, G. F.)—**109**, 1779
Shapiro, Anatole M. (see Henri, Victor P.)—**110**, 591(L)
Shapiro, J. (see Hull, M. H., Jr.)—**109**, 846
Shapiro, S. (see Artman, J. O.)—**109**, 1392(L)
Sharp, R. D. and W. W. Buechner. Angular distributions of elastically and inelastically scattered protons from In—**112**, 897
—— **and W. W. Buechner.** Coulomb excitation studies using inelastically scattered particles—**109**, 1698
Shatas, R. A., J. F. Marshall, and M. A. Pomerantz. Post-bombardment conductivity in MgO crystals—**109**, 1953
Shaw, R. W. (see Decker, D. L.)—**112**, 1888
Sheffield, J. C. (see White, F. A.)—**109**, 437
Shirley, Virginia S. and John O. Rasmussen. Electron-capture decay of Gd^{141}—**109**, 2092
Shkoda-Ulyanov, V. A. (see Gol'danskii, V. I.)—**109**, 1762
Shockley, William. Predicted intervalley scattering effects in Ge—**110**, 1207(L)
—— (see Sah, Chih-Tang)—**109**, 1103
Shore, F. J. and V. L. Sailor. Slow neutron resonances in U^{235}—**112**, 191
Shtrikman, S. (see Aharoni, A.)—**109**, 1522
Shugart, Howard A. (see Ewbank, W. B.)—**110**, 595(L)
—— (see Marino, Lawrence L.)—**111**, 286
—— (see Nierenberg, William A.)—**112**, 186
Shull, F. B. and A. J. Elwyn. Proton angular distributions from $Zn^{64,66,67,68}(d,p)$ reactions—**112**, 1667
—— (see Elwyn, A. J.)—**111**, 925
Shull, Harrison and Per-Olov Löwdin. Variation theorem for excited states—**110**, 1466(L)
Shulman, R. G. and V. Jaccarino. Origin of nuclear magnetic resonance shifts in paramagnetic MnF_2—**109**, 1084
——, **B. J. Wyluda, and H. J. Hrostowski.** Nuclear magnetic resonance in semiconductors: exchange broadening in GaAs and InAs—**109**, 808
Siegbahn, Kai (see Sokolowski, Evelyn)—**110**, 776(L)
Siegert, A. J. F. and Ei Teramoto. Simplified derivation of binary collision expansion and its connection with scattering operator expansion—**110**, 1232
Signell, P. S. and R. E. Marshak. Semiphenomenological two-nucleon potential—**109**, 1229
Sihvonen, Y. T. (see Bleil, C. E.)—**111**, 1522
Sikkeland, Torbjørn, Stanley G. Thompson, and Albert Ghiorso. Reactions of U^{238} with C ions—**112**, 543
Silsbee, Henry B. (see Ewbank, W. B.)—**110**, 595(L)
—— (see Marino, Lawrence L.)—**111**, 286
—— (see Nierenberg, William A.)—**112**, 186
Silva, E. and J. Goldemberg. Inelastic scattering of photons in Y^{89}—**110**, 1102
—— (see Farinelli, U.)—**112**, 1994
Silverberg, Rein (see Goldhaber, Gerson)—**110**, 1474(L)
Silverman, S. M. Theorem for generalized oscillator strengths—**111**, 1114
Silverstein, Edward A. (see Weinman, James A.)—**111**, 277
Silvestrini, V. (see Eisler, F.)—**112**, 979
Simmons, R. O. and R. W. Balluffi. X-ray study of deuteron-irradiated Cu near 10°K—**109**, 1142
Simon, Albert (see Goldman, David T.)—**111**, 383
Simpson, J. Arol (see Marton, L.)—**110**, 1057
Simpson, J. H. and H. Y. Carr. Diffusion and nuclear spin relaxation in water—**111**, 1201
Singwi, K. S. (see Khubchandani, P. G.)—**110**, 70
Sirlin, A. Pion decay and possible nonlocal effects in theory of Fermi interactions—**111**, 337
Sjoblom, R. (see Cox, S.)—**112**, 960
—— (see Smith, A.)—**111**, 1633
Sladek, R. J. Magnetoresistance oscillations in single-crystal and polycrystalline InAs—**110**, 817
Slater, W. E. (see Levi Setti, R.)—**111**, 1395
Slaughter, G. G., E. M. Harth, and M. M. Block. V-particle production by 1.9-Bev π^- mesons—**109**, 2111
Slepian, Joseph. Hydromagnetic equations for two isotopes in completely ionized gas—**112**, 1441
Slonczewski, J. C. Origin of magnetic anisotropy in Co-substituted magnetite—**110**, 1341
—— **and P. R. Weiss.** Band structure of graphite—**109**, 272
Smaller, B. (see Delbecq, C. J.)—**111**, 1235
Smith, A., P. Fields, A. Friedman, and R. Sjoblom. Thermal-neutron-induced fission of Th^{229}—**111**, 1633
—— (see Cox, S.)—**112**, 960
Smith, Charles S. (see Daniels, W. B.)—**111**, 713
Smith, Frances M. (see Barkas, Walter H.)—**112**, 622
Smith, G. W. and C. F. Squire. Pressure studies on nuclear magnetic resonance of solid hydrogen between 1.2° and 14°K—**111**, 188
Smith, J. H. (see Barton, M. Q.)—**110**, 1143

Smith, Lincoln G. Measurements of light masses with mass synchrometer—**111**, 1606
—— (see Friedman, Lewis)—**109**, 2214(L)
Smith, P. B. and P. M. Endt. Resonant absorption of γ radiation from $Al^{27}(p,\gamma)Si^{28}$ reactions—**110**, 397
—— **and P. M. Endt.** Resonant absorption of γ radiation from $Si^{30}(p,\gamma)P^{31}$ reaction—**110**, 1442
Smith, R. C. (see Mozley, R. F.)—**111**, 647
Smith, R. J. (see Schindler, A. I.)—**111**, 1746(E)
Smith, R. K. (see Knight, J. D.)—**112**, 259
Smith, Stephen J. (see Branscomb, Lewis M.)—**111**, 504
—— (see Burch, D. S.)—**112**, 171
Smith, W. G. (see Hamilton, J. H.)—**112**, 945; **112**, 2010
—— (see Lazar, N. H.)—**110**, 513
Smith, W. V. (see Keller, S. P.)—**110**, 850
—— (see Sorokin, P. P.)—**112**, 1513
Smoluchowski, R. (see Vaughan, W. H.)—**110**, 652
—— (see Wiegand, D. A.)—**110**, 991(L)
Smythe, Rodman, Robert M. Worlock, and Alvin V. Tollestrup. Recoil protons from meson photoproduction in H and D—**109**, 518
Snell, Arthur H. and Frances Pleasonton. Charge spectrometry for Xe^{133}-Cs^{133}—**111**, 1338
Snow, George A. Comparison of Σ^+p and Σ^-n systems—**110**, 1192
Snow, William R. (see Fite, Wade L.)—**112**, 1161
Snyder, D. D. and D. J. Montgomery. Electrical resistivity of separated Li isotopes—**109**, 222(L)
—— (see Bleil, C. E.)—**111**, 1522
Snyder, J. N. (see Nilson, R.)—**109**, 850
Sodha, M. S. and P. C. Eastman. Hall mobility of carriers in impure nondegenerate semiconductors—**112**, 44
—— **and P. C. Eastman.** Variation of Hall mobility of carriers in nondegenerate semiconductors with electric field—**110**, 1314
—— **and Y. P. Varshni.** Transport phenomena in completely ionized gas considering electron-electron scattering—**111**, 1203
Sokolowski, Evelyn, Carl Nordling, and Kai Siegbahn. Chemical shift effect in inner electronic levels of Cu due to oxidation—**110**, 776(L)
Solomon, I. Multiple echoes in solids—**110**, 61
Sommerfield, Charles M. (see Karplus, Robert)—**111**, 1187
Sonder, E. and D. K. Stevens. Magnetic properties of As-doped Si—**110**, 1027
Sood, P. C. (see Green, A. E. S.)—**111**, 1147
Sorensen, R. A. Electromagnetic effects in meson-nucleon scattering—**112**, 1813
Sorokin, P. P., I. L. Gelles, and W. V. Smith. Multiple quantum transitions in paramagnetic resonance—**112**, 1513
—— (see Bloembergen, N.)—**110**, 865
Soule, D. E. Analysis of galvanomagnetic de Haas-van Alphen type oscillations in graphite—**112**, 708
—— Magnetic field dependence of Hall effect and magnetoresistance in graphite single crystals—**112**, 698
Southgate, P. D. Temperature dependence of internal friction in Ge—**110**, 855
Spear, Walter E. Surface effects in electron-irradiated Ge at 80°K—**112**, 362
Spedding, F. H. (see Anderson, G. S.)—**109**, 243; **111**, 1257
—— (see Behrendt, D. R.)—**109**, 1544
—— (see Rhodes, B. L.)—**109**, 1547
—— (see Thoburn, W. C.)—**110**, 1298; **112**, 56
Spence, R. D. and R. D. Ewing. Evidence for antiferromagnetism in $Cu_3(CO_3)_2(OH)_2$—**112**, 1544
Spencer, E. G. (see LeCraw, R. C.)—**110**, 1311
Spencer, H. E. Quantum efficiency of photoconductive PbS films—**109**, 1074
Sperduto, A. and W. W. Buechner. (p,p') and (p,α) reactions from K^{39}—**109**, 462
—— (see Mazari, M.)—**112**, 1692
Spicer, W. E. Photoemissive, photoconductive, and optical absorption studies of alkali-antimony compounds—**112**, 114
Spitzer, Richard. Contribution of three-body forces to binding of hyperfragments—**110**, 1190
—— **and Henry P. Stapp.** Polarization and angular correlation in production and decay of particles of spin 1/2 and spin 3/2—**109**, 540
Spitzer, W. G. and H. Y. Fan. Effect of neutron irradiation on infrared absorption in Si—**109**, 1011(L)
Spruch, Larry. Bounds on scattering phase shifts. II—**109**, 2149
—— **and Martin Kelly.** Bounds on scattering phase shifts. I—**109**, 2144
—— (see Gold, Wallace)—**110**, 290(L)
Squire, C. F. (see Briscoe, C. V.)—**112**, 1540
—— (see Smith, G. W.)—**111**, 188
Sreedhar, A. K. (see Brewer, D. F.)—**110**, 282(L)
Srivastava, G. P. (see Krishnaji)—**109**, 1560
Srivastava, Prem Prakash and George Sudarshan. Multiple production of pions in nuclear collisions—**110**, 765
Stallwood, R. A., R. B. Sutton, T. H. Fields, J. G. Fox, and J. A. Kane. Neutral pions from p-p collisions—**109**, 1716
—— (see Fields, T. H.)—**109**, 1704; **109**, 1713
Stangelo, R. (see Eisler, F.)—**112**, 979
Stapp, Henry P. (see Spitzer, Richard)—**109**, 540
Starner, J. W. (see Cranston, F. P., Jr.)—**110**, 1427
Statz, H. and G. A. deMars. Electrical conduction via slow surface states on semiconductors—**111**, 169
Staub, H. (see Stephens, W. E.)—**109**, 1196
Steele, M. C. (see Glicksman, M.)—**110**, 1204(L)
Stehle, P. Calculation of electron-electron scattering—**110**, 1458
Stein, P. C. and K. C. Rogers. Photoproduction of π^0 mesons from H at 500–900 Mev—**110**, 1209(L)
Stein, William E. and Stanley L. Whetstone, Jr. Prompt-neutron emission from spontaneous-fission modes of Cf^{252}—**110**, 476
Steinberg, M. S. Magnetic effects in attenuation of transverse acoustic waves by conduction electron transport—**110**, 772(L)
—— Resonant absorption of sound in metals—**110**, 1467(L)
—— Ultrasonic attenuation and dispersion in metals at low temperatures—**111**, 425
—— Viscosity of electron gas in metals—**109**, 1486
Steinberger, J. (see Eisler, F.)—**110**, 226; **112**, 979
Steiner, H. (see Agnew, L.)—**110**, 994(L)
Stelson, P. H. and F. K. McGowan. Coulomb excitation of medium-weight even-even nuclei—**110**, 489
—— (see McGowan, F. K.)—**109**, 901
Stephens, Cynthia (see Green, Louis C.)—**112**, 1187
Stephens, W. E. and H. Staub. Search for pair production by protons—**109**, 1196
—— (see Rhodes, Jacob L.)—**110**, 1415
—— (see Wolff, Milo M.)—**112**, 890
Stephenson, S. T. (see El-Hussaini, Jassim M.)—**109**, 51
Stern, Edward A. Theory of anharmonic properties of solids—**111**, 786
Stern, Frank (see Matossi, Frank)—**111**, 472
Sternheimer, R. M. Effect of complex spin-orbit coupling on polarization of protons elastically scattered from nuclei—**112**, 1785
—— **and S. J. Lindenbaum.** Pion production in pion-nucleon collisions—**109**, 1723
—— (see Lindenbaum, S. J.)—**110**, 1174
Stevens, C. M. (see Wing, J.)—**111**, 590
Stevens, D. K. (see Sonder, E.)—**110**, 1027
Stevenson, M. Lynn. Σ^0 mass—**111**, 1707
—— (see Alvarez, Luis W.)—**112**, 1267

Stevenson, P. C., H. G. Hicks, W. E. Nervik, and D. R. Nethaway. Further radiochemical studies of high-energy fission products—111, 886
Stewart, L. (see Brolley, J. E., Jr.)—109, 1277
Stier, P. M. (see Barnett, C. F.)—109, 385
Stoering, J. P. (see Bratenahl, A.)—110, 927
Stork, D. H. (see Helmy, E.)—112, 1793
Storm, M. (see Metropolis, N.)—110, 185; 110, 204
Strandberg, M. W. P. Spin-lattice relaxation—110, 65
——, **C. F. Davis, B. W. Faughnan, R. L. Kyhl, and G. J. Wolga.** Operation of solid-state quantum-mechanical amplifier—109, 1988
—— (see Davis, C. F.)—111, 1268
Streib, J. F. (see Brock, R. L.)—109, 399
Stroke, H. H. (see Reynolds, J. B.)—109, 465
Strominger, D. (see Gallagher, C. J., Jr.)—110, 725; 111, 1746(E)
Struck, C. W. (see Ellis, S. G.)—109, 1860(L)
Stump, Robert (see Byers, Don H.)—112, 77
Sturrock, P. A. Kinematics of growing waves—112, 1488
Sucher, J. Energy levels of two-electron atom to order α^3 ry: ionization energy of He—109, 1010(L)
Sucov, Eugene (see Kallmann, Harmut)—109, 1473
Sudarshan, E. C. G. and R. E. Marshak. Chirality invariance and universal Fermi interaction—109, 1860(L)
—— (see Okubo, S.)—112, 665
—— (see Srivastava, Prem Prakash)—110, 765
Suddeth, J. A. (see Marton, L.)—110, 1057
Sugarman, Nathan (see Porile, Norbert T.)—111, 1746(E)
Sugawara, M. K_{e3} and $K_{\mu 3}$ decay modes—112, 2128
Sugioka, Etsu (see Ishiguro, Masakazu)—110, 1070
Suh, Kiu S. Λ-nucleon interaction in hypernucleus ${}_{\Lambda}Be^{9}$—111, 941
Suhl, H. Effective nuclear spin interactions in ferromagnets—109, 606(L)
Suita, Tokuo (see Inuishi, Yoshio)—109, 1509
Summers-Gill, Robert G. Scattering at 12-Mev protons, 24-Mev deuterons, and 48-Mev α particles by Be—109, 1591
Sun, C. R. and Byron T. Wright. Radionuclide K^{37}—109, 109
Sundaresan, M. K. (see Nigam, B. P.)—111, 284
Sunderland, R. J. (see Nierenberg, William A.)—112, 186
Sunyar, A. W. (see Goldhaber, M.)—109, 1015(L)
Sutton, Paul M. Variation of elastic constants of crystalline Al with temperature between 63°K and 773°K—112, 2139(E)
Sutton, R. B. (see Fields, T. H.)—109, 1704; 109, 1713
—— (see Stallwood, R. A.)—109, 1716
Swamy, N. V. V. J. and A. E. S. Green. Coulomb exchange energy from shell-model wave functions—112, 1719
Swan, J. B. (see Powell, C. J.)—110, 657
Swann, C. P. (see Metzger, F. R.)—110, 906
—— (see Rasmussen, V. K.)—110, 154
Swann, W. F. G. Mass-energy relation in quantum theory—109, 998
Swanson, Robert A. Depolarization of positive muons in condensed matter—112, 580
Swartz, C. E. (see Cumming, J. B.)—111, 1386
Swenson, C. A. Phase transition in solid Hg—111, 82
—— (see Jennings, L. D.)—112, 31
Swenson, D. A. (see Johnston, L. H.)—111, 212
Swihart, J. (see Ekstein, H.)—109, 557

Taft, E. A., H. R. Philipp, and L. Apker. Photoelectric emission from valence band in AgBr—110, 876
Tai, Yuin-Kwei, George P. Millburn, Selig N. Kaplan, and Burton J. Moyer. Neutron yields from thick targets bombarded by 18- and 32-Mev protons—109, 2086
Talmi, I. (see Unna, I.)—112, 452
Tamor, S. (see Auer, P. L.)—111, 1017
Tamura, Taro. Two-particle interactions in deformed nuclei—111, 859
Tanaka, Katsumi. Application of dispersion relations to neutron-electron interaction—109, 578
—— Application of dispersion relations to nucleon structure—110, 1185
—— (see Ekstein, H.)—109, 557
Tanikawa, Yasutaka and Satosi Watanabe. Chirality of tensors and parity-nonconserving interactions—110, 289(L)
Tanttila, W. H. (see Jennings, D. A.)—109, 1059
—— (see Kraus, O.)—109, 1052
Tassie, L. J. and F. C. Barker. Application to electron scattering of center-of-mass effects in nuclear shell model—111, 940
Tatcher, M. D. (see Fischer, G. E.)—110, 286(L)
Tatro, C. A., T. R. Palfrey, R. M. Whaley, and R. O. Haxby. Differential cross sections for photodisintegration of deuteron at far forward and backward angles—112, 932
Tatsumoto, Eiji. Magnetoresistance coefficients and their temperature dependence in Fe and Si steel—109, 658
Tauber, G. E. Spin rotational constant of H_2—112, 866
Tautfest, G. W. Absolute cross sections for reactions $B^{11}(\gamma,2p)Li^{9}$ and $C^{12}(\gamma,3p)Li^{9}$—110, 708
—— Search for delayed neutrons from photon bombardment of Li—111, 1162
Taxman, N. Classical theory of transport phenomena in dilute polyatomic gases—110, 1235
Taylor, C. J. (see Ashby, V. J.)—111, 616
Taylor, J. C. β decay of pion—110, 1216(L)
Taylor, John G. (see Bremermann, H. J.)—109, 2178
—— (see Rockmore, Ronald M.)—112, 992
Taylor, R. E. (see Mozley, R. F.)—111, 647
Teem, J. M. (see Selove, W.)—112, 1658
Telegdi, V. L. (see Burgy, M. T.)—110, 1214(L)
Temmer, G. M. and N. P. Heydenburg. Low-lying excited states of Na^{22}—111, 1303
Templeton, I. M. (see Pearson, W. B.)—109, 1094
Tendam, D. J. (see Gailar, O. H.)—112, 1989
—— (see Seidlitz, L.)—110, 682
Teramoto, Ei (see Siegert, A. J. F.)—110, 1232
Terhune, R. W. (see Makhov, G.)—109, 1399(L)
Ter-Martirosyan, K. A. Equation for vertex part corresponding to fermion-fermion scattering—111, 948
—— (see Abrikosov, A. A.)—111, 321
—— (see Berestetsky, V. B.)—111, 522
Terrell, J. and D. M. Holm. Excitation function for $Fe^{56}(n,p)Mn^{56}$—109, 2031
—— (see Diven, B. C.)—109, 144
Teucher, M. W., D. M. Haskin, and Marcel Schein. Production spectrum of mesons in high-energy nucleon-nucleon collisions—111, 1384
—— (see Lohrmann, E.)—112, 587
Teutsch, W. B. (see Okubo, S.)—112, 665
Tewordt, Ludwig. Distortion of lattice around interstitial, crowdion, and vacancy in Cu—109, 61
Thaler, Roy M. (see Gammel, J. L.)—109, 2041
—— (see Igo, George)—109, 2133
—— (see McManus, H.)—110, 590(L)
Theimer, O. Entropy of vacancies in ionic crystals—112, 1857
—— Equilibrium concentration of vacancy pairs in ionic crystals—109, 1095
Thekaekara, M. and G. H. Dieke. Emission lines from preionized levels in Kr and Xe—109, 2029
Thirring, Walter E. Theory of internal space—111, 986
Thoburn, W. C., S. Legvold, and F. H. Spedding. Magnetic properties of Gd-La and Gd-Y alloys—110, 1298
——, **S. Legvold, and F. H. Spedding.** Magnetic properties of Tb metal—112, 56
Thomas, Billy S. and Wendell G. Holladay. Statistics of π mesons—110, 981

Thomas, D. G. (see Collins, R. J.)—**112**, 388
Thomas, L. H. General relativity and particle dynamics—**112**, 2129
—— (see Tycko, D. H.)—**109**, 369
Thomas, M. Tom (see Russek, A.)—**109**, 2015
Thomas, T. D. (see Vandenbosch, R.)—**111**, 1358
Thompson, Stanley G. (see Sikkeland, Torbjørn)—**112**, 543
Thorndike, E. H. (see Boley, F. I.)—**110**, 915
Thornton, D. E. J., R. E. Meads, and C. H. Collie. Energy levels of Na^{23} from $Ne^{22}(p,\gamma)Na^{23}$ reaction—**109**, 480
Thorpe, Munson M. (see Wyman, Marvin E.)—**112**, 1264
Thouless, D. J. Application of perturbation methods to theory of nuclear matter—**112**, 906
Thurmond, C. D. (see Feher, G.)—**109**, 221(L)
Tibell, Gunnar (see Hillman, Peter)—**110**, 1218(L)
Tidman, D. A. Structure of shock wave in fully ionized hydrogen—**111**, 1439
—— Suprathermal particle production by binary stars—**112**, 1759
—— (see Parker, E. N.)—**111**, 1206; **112**, 1048
Tiemann, Jerome J. Asymptotic expansion for high-energy potential scattering—**109**, 183
—— (see Igo, George)—**109**, 2133
Tiller, Calvin O. and G. Wayne Clark. Coercive force *vs* thickness for thin films of Ni-Fe—**110**, 583(L)
Tilley, D. R. (see Cheever, G. D.)—**110**, 922
Tinkham, M. Penetration depth, susceptibility, and nuclear magnetic resonance in finely divided superconductors—**110**, 26
—— **and R. E. Glover, III.** Superconducting energy gap inferences from thin-film transmission data—**110**, 778(L)
Tinlot, J. (see Bardon, M.)—**110**, 780(L)
—— (see Heer, E.)—**111**, 640; **111**, 645
Tisza, Laszlo. Generalized phase rule and symmetry of superfluid state—**110**, 587(L)
Tobin, Ralph A., J. McElhinney, and L. Cohen. Photoneutron thresholds for Fe, Ge, Rb, and Hf—**110**, 1388
—— (see Bendel, Warren L.)—**111**, 1297
Tokunaga, K. (see Verma, G. S.)—**112**, 1521
Tollestrup, Alvin V. (see Smythe, Rodman)—**109**, 518
Tomasch, W. J. Structure in thermoelectric power of dilute InPd alloys—**109**, 69
—— **and J. R. Reitz.** Thermoelectric power of dilute In-Pb and In-Tl alloys—**111**, 757
Tomboulian, D. H. (see Bedo, D. E.)—**109**, 35
Tomkins, Frank S. (see Fred, Mark)—**111**, 1747(E)
Toms, M. Elaine and John McElhinney. Photoproduction of α particles from several metallic elements—**111**, 561
Torrey, H. C. (see Bennett, Lawrence H.)—**109**, 2218(E)
Toth, Kenneth S. and John O. Rasmussen. Studies of rare earth α emitters—**109**, 121
Townes, C. H. (see Giordmaine, J. A.)—**109**, 302
—— (see Rosenblum, B.)—**109**, 400
—— (see Schawlow, A. L.)—**112**, 1940
Toxen, Arnold M. Thermal resistivity of point defects—**110**, 585(L)
Trammell, G. T., Henry Zeldes, and Ralph Livingston. Effect of environmental nuclei in electron spin resonance spectroscopy—**110**, 630
Traub, J. and H. M. Foley. Variational calculations of 2 ^3S state of He—**111**, 1098
Traughber, R. L. (see Moak, C. D.)—**110**, 1369
Treanor, Charles E. (see Nicklas, James P.)—**110**, 370
Treder, H. Space-time structure of static spherically symmetric scalar field—**112**, 2127
Trees, Richard E. Hfs formulas for LS coupling—**111**, 1746(E)
—— Low even configurations in first spectrum of Re (Re I)—**112**, 165
Treiman, S. B. Recoil effects in K capture and β decay—**110**, 448
—— (see Federbush, P.)—**112**, 642
—— (see Goldberger, M. L.)—**110**, 1178; **110**, 1478(L); **111**, 354
—— (see Khuri, N. N.)—**109**, 198
—— (see Pais, A.)—**109**, 1759
Troubetzkoy, E. S. (see Rae, E. R.)—**112**, 492
True, William W. and Kenneth W. Ford. Shell-model theory of Pb^{206}—**109**, 1675
Truell, Rohn and Raymond Bayer. Evidence for dislocation breakaway in pure Al—**110**, 1206(L)
—— (see Einspruch, Norman G.)—**109**, 652
Tucker, Ronald F., Jr. Paramagnetic resonance study of Cu-doped AgCl—**112**, 725
Turkevich, Anthony (see Metropolis, N.)—**110**, 185; **110**, 204
Turkot, F. (see Heinberg, M.)—**110**, 1211(L)
Tuzzolino, Anthony J. Piezoresistance constants of n-type InAs—**112**, 30
—— Piezoresistance constants of p-type InSb—**109**, 1980
Tweet, A. G. Precipitation of Cu in Ge. II. Supersaturation effects—**111**, 57
—— Precipitation of Cu in Ge. III. Quench effects in nearly perfect crystals—**111**, 67
Tycko, D. H., L. H. Thomas, and K. M. King. Numerical calculation of the wave functions and energies of 1^1S and 2^3S states of He—**109**, 369

Überall, H. (see Fronsdal, C.)—**111**, 580
Ufford, C. W. and H. B. Callen. Orbit-orbit interactions in atomic spectra—**110**, 1352
—— (see Innes, F. R.)—**111**, 194
Ulrich, J. P. (see Johnson, C. H.)—**109**, 1243
Umezawa, Hiroomi (see Konuma, Michiji)—**109**, 1404(L)
—— (see Scarf, F. L.)—**109**, 1848
Unik, J. P. (see Gallagher, C. J., Jr.)—**110**, 725; **111**, 1746(E)
Unna, I. and I. Talmi. Energies of ground and excited nuclear configurations in first $p_{\frac{1}{2}}$ region—**112**, 452
Urstein, T. (see Bosch, H.)—**111**, 898

Vallarta, M. S., R. Gall, and J. Lifshitz. Geomagnetic coordinates and cosmic radiation—**109**, 1403(L)
Vandenbosch, Robert and Glenn T. Seaborg. Considerations on probability of nuclear fission—**110**, 507
——, **T. D. Thomas, S. E. Vandenbosch, R. A. Glass, and G. T. Seaborg.** Spallation-fission competition in heaviest elements; He ion-induced reactions in U isotopes—**111**, 1358
Vandenbosch, S. E. (see Vandenbosch, R.)—**111**, 1358
van der Leun, C. and P. M. Endt. Investigation of four resonances in reaction $Si^{29}(p,\gamma)P^{30}$—**110**, 96
Vanderslice, J. T. (see Mason, E. A.)—**112**, 445
van Heerden, I. J. (see Reitmann, D.)—**110**, 1093
Van Heyningen, R. S. and Frederick C. Brown. Transient photoconductivity in AgCl at low temperatures—**111**, 462
van Kampen, N. G. Thermal fluctuations in nonlinear system—**110**, 319
Van Patter, D. M. (see Porter, W. C.)—**112**, 468
van Rossum, Ludwig (see Kerth, Leroy T.)—**109**, 1784
van Vliet, K. M. Derivation of fluctuation-dissipation theorem—**109**, 1021
—— Irreversible thermodynamics and carrier density fluctuations in semiconductors—**110**, 50
Varma, R. K. (see Murty, G. S.)—**112**, 1789
Varshni, Y. P. (see Sodha, M. S.)—**111**, 1203
Vaughan, W. H., W. J. Leivo, and R. Smoluchowski. Density and hardness changes produced by plastic deformation in KCl crystals—**110**, 652
Vedam, K. (see Hoshino, S.)—**112**, 405
—— (see Pepinsky, R.)—**110**, 1309; **111**, 430; **111**, 1467; **111**, 1508
Vegors, Stanley H., Jr. (see Duffield, Robert B.)—**112**, 1958
Verma, G. S. and K. Tokunaga. Antiferromagnetism of $CuF_2 \cdot 2H_2O$—**112**, 1521

Vervier, J. F. and A. Martegani. Total neutron cross sections near 14 Mev—**109**, 947
Vette, J. I. Photoproduction of neutral pions at energies 500 to 940 Mev—**111**, 622
Vigier, Jean-Pierre (see Bohm, David)—**109**, 1882
Vineyard, George H. Scattering of slow neutrons by liquid—**110**, 999
Vise, J. B. (see Koller, N. Benczer)—**109**, 85
Vogelsang, W. F. and J. N. McGruer. Angular distributions from deuteron-induced reactions in Na—**109**, 1663
Vogt, Erich. Resonance theory of neutron cross sections of fissionable nuclei—**112**, 203
Vook, Richard and Charles Wert. Expansion of Cu upon low-temperature deuteron irradiation—**109**, 1529
Vorona, J. (see Olness, J. W.)—**112**, 475

Wagner, M. D. (see Marton, L.)—**110**, 1057
Wagner, P. E. (see Chester, P. F.)—**110**, 281(L)
Waldron, R. D. (see Balkanski, M.)—**112**, 123
Walker, R. L. (see Brody, H. M.)—**110**, 1213(L)
—— (see Donoho, P. L.)—**112**, 981
Walker, R. M. (see Corbett, J. W.)—**110**, 767(L)
Wallmann, J. C. (see Abraham, M.)—**112**, 553
Walmsley, R. H. and C. T. Lane. Angular momentum of liquid He—**112**, 1041
Wang, Yenking (see Green, Louis C.)—**112**, 1187
Wangsness, Roald K. Effective parameters in ferrimagnetic resonance—**111**, 813
Waniek, R. W. (see Beghian, L. E.)—**110**, 1479(L)
Wapstra, A. H. (see Boehm, F.)—**109**, 456
Warburton, E. K. and H. J. Rose. γ rays from $C^{13}+d$ and excited states of C^{14}—**109**, 1199
Ward, A. L. Effect of space charge in cold-cathode gas discharges—**112**, 1852
Waring, R. K. (see Jarrett, H. S.)—**111**, 1223
Warren, B. (see Knight, J. D.)—**112**, 259
Wataghin, A. (see Lannutti, Joseph E.)—**109**, 2121
Wataghin, V. (see Fubini, S.)—**111**, 329
Watanabe, Hiroshi (see Marton, L.)—**110**, 1057
Watanabe, Satosi (see Tanikawa, Yasutaka)—**110**, 289(L)
Waters, Paul M. Kinetic ejection of electrons from W by Cs and Li ions—**111**, 1053
—— Kinetic ejection of electrons from W by Cs ions—**109**, 1466
Waterstrat, R. M. (see Kasper, J. S.)—**109**, 1551
Watkins, G. D. Sign of cubic field splitting for Mn^{++} in ZnS—**110**, 986(L)
Watson, Richard E. Analytic Hartree-Fock solutions for $O^{=}$—**111**, 1108
—— (see Nesbet, R. K.)—**110**, 1073
Watson, W. K. R. (see Karzas, W. J.)—**110**, 253
—— (see Norton, R. E.)—**110**, 996(L)
Watson, W. W. (see Moran, Thomas I.)—**109**, 1184; **111**, 380
Weber, Gustav. Energy spectrum of α particles from Li^7+d at $E_d=1.0$ Mev—**110**, 529
Weger, M. and W. Low. Paramagnetic resonance spectrum of Gd in hydrated lanthanum trichloride—**111**, 1526
Wehner, Gottfried K. Low-energy sputtering yield in Hg—**112**, 1120
Wei, Chuan-Tseng, Chin-Huan Cheng, and Paul A. Beck. Specific heat of face-centered cubic Mn-Fe alloy at liquid He temperatures—**112**, 696
Weil, J. L. and K. W. Jones. $N^{14}(d,n)O^{15}$ and $N^{15}(d,n)O^{16}$ reactions—**112**, 1975
—— **and K. W. Jones.** Total neutron cross sections of Mg, Al, Fe, Cu, Zn, Mo, and Pb from 4 to 8 Mev—**110**, 466
—— (see Jones, K. W.)—**112**, 1252
Weinberg, Steven. Charge symmetry of weak interactions—**112**, 1375
—— Time-reversal invariance and θ_2^0 decay—**110**, 782(L)
—— (see Okubo, S.)—**112**, 665
Weinman, James A. and Edward A. Silverstein. Elastic scattering of α particles by C^{14}—**111**, 277
—— (see Windham, P. M.)—**109**, 1193
Weisberg, Leonard R. and S. L. Quimby. Ordering and disordering processes in Cu_3Au. I—**110**, 338
Weiss, M. S. (see Fuller, E. G.)—**112**, 554; **112**, 560
Weiss, P. R. and Elihu Abrahams. Correlation of electron amplitudes in impure metals—**111**, 722
—— (see Slonczewski, J. C.)—**109**, 272
Weitzner, H. Fundamental interactions and hyperfragments—**110**, 593(L)
—— (see Brueckner, K. A.)—**110**, 431
Welker, J. P. (see Perlman, M. L.)—**110**, 381
Weneser, J. (see Church, E. L.)—**109**, 1299
Wentzel, George. Meissner effect—**111**, 1488
Wenzel, William A. (see Coombes, Charles A.)—**112**, 1303
Wergeland, H. (see Hemmer, P. Chr.)—**111**, 689
Werner, Frederick G. and John A. Wheeler. Super-heavy nuclei—**109**, 126
Wert, Charles (see Vook, Richard)—**109**, 1529
Wertheim, G. K. Electron-bombardment damage in Si—**110**, 1272
—— Neutron-bombardment damage in Si—**111**, 1500
—— Transient recombination of excess carriers in semiconductors—**109**, 1086
Wetherell, A. M. (see Brody, H. M.)—**110**, 1213(L)
Whaley, R. M. (see Tatro, C. A.)—**112**, 932
Wheatley, J. C. (see Estle, T. L.)—**112**, 1576
Wheeler, John A. (see Werner, Frederick G.)—**109**, 126
Whetstone, A. and J. Halpern. Angular distribution of photoprotons from deuterium from 9 to 23 Mev—**109**, 2072
Whetstone, Stanley L., Jr. (see Stein, William E.)—**110**, 476
White, David, Chien Chou, and H. L. Johnston. Heat capacity in normal and superconducting states and critical field of Ta—**109**, 797
—— (see Chou, Chien)—**109**, 788
White, F. A., F. M. Rourke, J. C. Sheffield, R. P. Schuman, and J. R. Huizenga. Absolute energy measurement of α particles from Po^{210}—**109**, 437
White, G. K., S. B. Woods, and M. T. Elford. Thermal conductivity of Se at low temperatures—**112**, 111
White, H. (see Agnew, L.)—**110**, 994(L)
White, Harrison C. Atomic force constants of Cu from Feynman's theorem—**112**, 1092
White, J. A. (see Drake, C. W.)—**112**, 1627
White, J. G. (see Ellis, S. G.)—**109**, 1860(L)
White, R. Stephen (see Gilbert, Francis C.)—**109**, 1770
Whitehead, C., W. R. McMurray, M. J. Aitken, N. Middlemas, and C. H. Collie. Ejection of photoprotons from light elements by 45–110 Mev bremsstrahlung—**110**, 941
Whitehead, W. D. (see Aull, L. B.)—**110**, 1113
Whitten, R. C. and M. M. Block. π^--p interactions at 1.85 Bev/c—**111**, 1676
Wichmann, Eyvind H. (see Karplus, Robert)—**111**, 1187
Wiedenbeck, M. L. (see Arns, R. G.)—**111**, 1631; **112**, 229
—— (see Funk, E. G., Jr.)—**109**, 922; **112**, 1247
—— (see Hickman, G. D.)—**111**, 539
Wieder, H. H. Ferroelectric polarization reversal in Rochelle salt—**110**, 29
Wiegand, C. (see Agnew, L.)—**110**, 994(L)
Wiegand, D. A. and R. Smoluchowski. Evidence for interstitials in low-temperature x-ray irradiated LiF—**110**, 991(L)
Wigner, E. P. (see Salecker, H.)—**109**, 571
Wikner, E. G. and T. P. Das. Antishielding of nuclear quadrupole moments in heavy ions—**109**, 360
Wilets, Lawrence (see Chase, D. M.)—**110**, 1080
—— (see Rotenberg, Manuel)—**110**, 1126
Wilkinson, D. H. Parity conservation in strong interactions: introduction and reaction $He^4(d,\gamma)Li^6$—**109**, 1603

—— Parity conservation in strong interactions: reactions $B^{11}(p,p')B^{11*}_{2.14}$ and $F^{19}(p,\alpha)O^{16*}_{7.15}$—**109**, 1610
—— Parity conservation in strong interactions: reactions $Li^7(p,p')Li^{7*}_{0.477}$—**109**, 1614
Wilkinson, M. K. (see Koehler, W. C.)—**110**, 37
—— (see Wollan, E. O.)—**110**, 638; **112**, 1132
Wilkinson, Roger G. (see Cressman, Paul J.)—**109**, 872
Willard, H. B. (see Wills, J. E., Jr.)—**109**, 891
Willardson, R. K. (see Beer, A. C.)—**110**, 1286
Wille, R. G. and R. W. Fink. Two new promethium isotopes; cross sections of some Sm isotopes for 14.8-Mev neutrons—**112**, 1950
Williams, H. Bartel (see Hatch, Albert J.)—**112**, 681
Williams, John H. and Morton K. Brussel. Elastic scattering of 40-Mev protons by deuterons—**110**, 136
Williams, R. E. (see Baker, W. F.)—**112**, 1763
Williamson, Claude F., Emmett L. Hudspeth, I. L. Morgan, and R. G. Moore. Activation cross section for reaction $Na^{23}(n,p)Ne^{23}$—**110**, 139
Wills, J. E., Jr., J. K. Bair, H. O. Cohn, and H. B. Willard. Scattering of fast neutrons from C^{12} and F^{19}—**109**, 891
Wilson, Robert R. Possible new isobaric state of proton—**110**, 1212(L)
—— (see Heinberg, M.)—**110**, 1211(L)
Winckler, J. R., L. Peterson, R. Arnoldy, and R. Hoffman. X-rays from visible aurorae at Minneapolis—**110**, 1221
Windham, P. M., P. J. Joseph, and J. A. Weinman. Negative He ions—**109**, 1193
Wing, J., C. M. Stevens, and J. R. Huizenga. Radioactivity of Pb^{205}—**111**, 590
Winick, H. (see Sachs, A. M.)—**109**, 1733; **109**, 1750
Wisner, Robert J. (see Green, Louis C.)—**112**, 1187
Wolff, Milo M. and William E. Stephens. γ-ray absorption in C—**112**, 890
Wolff, P. A. Theory of plasma resonance in solids—**112**, 66
Wolfgang, R. L. (see Rowland, F. S.)—**110**, 175
Wolfsberg, M. (see Perlman, M. L.)—**110**, 381
Wolga, G. J. (see Strandberg, M. W. P.)—**109**, 1988
Wolicki, E. A. (see Johnston, R. L.)—**109**, 884
Wollan, E. O. Correlations suggesting *d*-shell configuration and magnetic exchange mechanism in Fe group metals—**110**, 1205(L)
——, **H. R. Child, W. C. Koehler, and M. K. Wilkinson.** Antiferromagnetic properties of Fe group trifluorides—**112**, 1132
——, **W. C. Koehler, and M. K. Wilkinson.** Neutron diffraction study of magnetic properties of $MnBr_2$—**110**, 638
—— (see Koehler, W. C.)—**110**, 37
Wolley, E. D. (see Ruby, S. L.)—**111**, 1493
Wong, C. (see Anderson, J. D.)—**110**, 160; **111**, 572
—— (see Nakada, M. P.)—**110**, 594(L); **110**, 1439
Woodruff, Truman O. (see Känzig, Werner)—**109**, 220(L)
Woods, R. M., Jr. (see Cork, J. M.)—**110**, 526
Woods, S. B. (see White, G. K.)—**112**, 111
Woodward, W. M. (see Heinberg, M.)—**110**, 1211(L)
Wooten, B. A. (see Sachs, A. M.)—**109**, 1733; **109**, 1750
Worcester, J. L. (see Hubbs, J. C.)—**109**, 390; **110**, 534
Worlock, Robert M. (see Smythe, Rodman)—**109**, 518
Wright, Byron T. (see Sun, C. R.)—**109**, 109
Wu, C. S. (see Koller, N. Benczer)—**109**, 85
Wyld, H. W., Jr. (see Frauenfelder, H.)—**110**, 451
Wyluda, B. J. (see Shulman, R. G.)—**109**, 808
Wyman, Marvin E., Edward M. Fryer, and Munson M. Thorpe. (n,t) cross sections for B^{10}, B^{11}, and Be^9—**112**, 1264
Wyman, Max and Hans Zassenhaus. Zero curvature tensor in Einstein's unified field theory—**110**, 228

Yagoda, Herman. Energy spectrum of π mesons produced by interaction of cosmic radiation with emulsion nuclei—**112**, 2087
Yamada, M. (see Morita, M.)—**111**, 237
Yamaka, Eiso and Kenichi Sawamoto. Electrical conductivity of NiO near Curie temperature—**112**, 1861
Yamashita, Jiro. Conductivity of nonpolar crystals in strong electric field. II—**111**, 1529
—— Oxygen band in MgO—**111**, 733
—— **and J. Kondo.** Superexchange interaction—**109**, 730
Yamazaki, Kazuo (see Lieb, Elliott H.)—**111**, 728
Yang, C. N. (see Bernstein, J.)—**111**, 313
—— (see Goldhaber, M.)—**112**, 1796
—— (see Lee, T. D.)—**109**, 1755; **112**, 1419
Yearian, H. J. (see Derbyshire, W. D.)—**112**, 1603
Yearian, M. R. and Robert Hofstadter. Magnetic form factor of neutron—**110**, 552
—— **and Robert Hofstadter.** Magnetic form factor of neutron at 600 Mev—**111**, 934
Yennie, D. R. (see Fried, H. M.)—**112**, 1391
Yevick, George J. (see Percus, Jerome K.)—**110**, 1
Yilmaz, Huseyin. New approach to general relativity—**111**, 1417
Yntema, J. L. (see Schiffer, J. P.)—**110**, 1216(L)
Yos, Jerrold M. Specificity of charge fluctuation forces. II—**110**, 800
—— (see Jehle, Herbert)—**110**, 793
Yoshinaka, Yôichirô (see Koga, Issac)—**109**, 1467
Yosida, Kei. Paramagnetic susceptibility in superconductors—**110**, 769(L)
—— Theory of superconductivity—**111**, 1255
Young, James E. Perturbation expansions in formal theory of scattering—**109**, 2141
Young, Otis B. and Fred E. Harvey. Charge spectrum, mean free paths, and flux of heavy primary cosmic rays at top of atmosphere—**109**, 529
Young, W. H. and N. H. March. Perturbation theory in wave mechanics—**109**, 1854
Ypsilantis, T. (see Agnew, L.)—**110**, 994(L)
Yuan, Luke C. L. (see Lindenbaum, S. J.)—**111**, 1380
Yuster, P. H. (see Delbecq, C. J.)—**111**, 1235

Zachariasen, Fredrik (see Chew, Geoffrey F.)—**110**, 265
—— (see Drell, S. D.)—**111**, 1727
—— (see Karzas, W. J.)—**110**, 253
Zachariasen, R. Decay of *K* mesons as test of universal Fermi interaction—**110**, 1481(L)
Zachariasen, W. H. (see Matthias, B. T.)—**112**, 89
Zassenhaus, Hans (see Wyman, Max)—**110**, 228
Zdanis, Richard (see Meissner, Hans)—**109**, 681
Zeidman, B. and J. M. Fowler. Angular distributions from deuteron bombardment of Be and B—**112**, 2020
—— (see Schiffer, J. P.)—**110**, 1216(L)
Zeldes, Henry (see Trammell, G. T.)—**110**, 630
Zemach, A. C. (see Mazo, R. M.)—**109**, 1564
Zemansky, M. W. (see Berman, A.)—**109**, 70
Zemel, Jay N. Surface transport theory—**112**, 762
—— **and Richard L. Petritz.** Magneto-surface experiments on Ge—1263
Zimmerman, R. L. (see Fox, J. D.)—**110**, 1472(L)
—— (see Seth, K. K.)—**110**, 692
Zipoy, D. M. 9.51-Mev level in N^{14}—**110**, 995(L)
—— (see Freier, G. D.)—**110**, 446
—— (see Heinberg, M.)—**110**, 1211(L)
Zitter, R. N. Role of traps in photoelectromagnetic and photoconductive effects—**112**, 852
Zollweg, R. J. Optical absorption and photoemission of barium and strontium oxides, sulfides, selenides, and tellurides—**111**, 113
Zorn, G. T. (see Hornbostel, J.)—**109**, 165; **112**, 1311
Zumino, Bruno (see Lüders, Gerhart)—**110**, 1450
Zwerdling, Solomon, Laura M. Roth, and Benjamin Lax. Direct transition exciton and fine structure of magneto-absorption spectrum in Ge—**109**, 2207(L)

Analytic Subject Index to Volume 112

References with (L) are to Letters to the Editor; references with (E) are to Errata. Items are listed under the following categories:

Acoustics
Astrophysics
Atomic and Molecular Beams
Atomic Mass and Abundance
Atomic Structure and Spectra
Biophysics
Chemical Effects and Properties
Constants, Standards, Units
Cosmic Radiation
Crystalline State
Dielectrics and Dielectric Properties
Diffraction
Diffusion
Elasticity and Plasticity
Electrical Conductivity and Resistance
Electrical Discharges
Electrical Properties
Electromagnetic Theory and Electrodynamics
Electrons and Positrons
Elementary Particle Interactions
Errata
Field Theory
Films, Properties
Fluid Dynamics
Gamma Rays
Gases
Geophysics
Helium, Liquid
Imperfections in Solids
Ionization
Ions
Ions and Electrons, Mobility
Liquids
Luminescence
Magnetic Properties
Magnetic Resonance
Mathematical Methods
Mechanics
Mesons and Hyperons
Methods and Instruments
Microwaves
Miscellaneous
Molecular Aggregates
Molecular Structure and Spectra
Neutrinos and Antineutrinos
Noise
Nuclear Fission
Nuclear Moments and Spin
Nuclear Photoeffects
Nuclear Reactions, General
Nuclear Reactions Induced by α Particles and He^3
Nuclear Reactions Induced by Deuterons and Tritons
Nuclear Reactions Induced by Mesons and Hyperons
Nuclear Reactions Induced by Neutrons
Nuclear Reactions Induced by Protons
Nuclear Spectra
Nuclear Structure Theory
Optical Properties
Quantum Electrodynamics
Quantum Mechanics
Radiation
Radioactivity
Range and Energy Loss
Relativity and Gravitation
Scattering, General
Scattering of α Particles
Scattering of Deuterons and Tritons
Scattering of Electrons and Positrons
Scattering of Mesons and Hyperons
Scattering of Neutrons
Scattering of Protons
Semiconductors
Spectra, General
Statistical Mechanics and Thermodynamics
Superconductivity
Thermal Properties
X-Rays

Absorption of Radiation (see **Optical Properties; Radiation**)

Acoustics
- Elastic constants of KI and KCl, M. H. Norwood and C. V. Briscoe—45
- Magnetic field dependence of ultrasonic attenuation in metals at low temperatures, Sergio Rodriquez—80
- Mechanical resonance dispersion in quartz at audio-frequencies, Edwin R. Fitzgerald—765
- Mechanical resonance dispersion in single crystals, Edwin R. Fitzgerald—1063

Adsorption (see **Gases**)

Aerodynamics (see **Fluid Dynamics**)

Afterglow (see **Electrical Discharges**)

Alloys (see **Crystalline State**)

Annihilation (see **Electrons and Positrons**)

Antiferroelectric Phenomena (see **Dielectrics and Dielectric Properties**)

Antiferromagnetism (see **Magnetic Properties**)

Antineutrinos (see **Neutrinos and Antineutrinos**)

Antineutrons (see **Elementary Particle Interactions**)

Antiprotons (see **Elementary Particle Interactions**)

Arcs (see **Electrical Discharges**)

Astrophysics
- Acceleration of cosmic radiation, G. S. Murty and R. K. Varma—1789
- Interplanetary magnetic field and its control of cosmic-ray variations, J. H. Piddington—589
- Suprathermal particle production by binary stars, D. A. Tidman—1759
- Suprathermal particles. III. Electrons, E. N. Parker—1429

Atmosphere (see **Geophysics**)

Atomic and Molecular Beams
- Hfs separations and magnetic moments of Cs^{127}, Cs^{129}, Cs^{130}, and Cs^{132}, William A. Nierenberg, Howard A. Shugart, Henry B. Silsbee, and R. J. Sunderland—186
- Magnetic moment of He in its $^3S_1$ metastable state, C. W. Drake, V. W. Hughes, A. Lurio, and J. A. White—1627
- Radio-frequency spectra of HD in strong magnetic fields, W. E. Quinn, J. M. Baker, J. T. LaTourrette, and N. F. Ramsey—1929

Atomic Mass and Abundance

Atomic Structure and Spectra
- Asymptotic solution of Thomas-Fermi equation for large atom radius, J. J. Gilvarry and N. H. March—140
- Correlation energies of some He- and Ne-like systems, Anders Fröman—870
- Detection of $\boldsymbol{\sigma}\cdot\mathbf{E}$ energy shift in positronium formed from polarized positrons, Felix E. Obenshain and Lorne A. Page—179
- Effect on energy of increased flexibility in separable factor of Hylleraas-type atomic wave function from H^- to OVII, Louis C. Green, Satoshi Matsushima, Cynthia Stephens, Eleanor K. Kolchin, Majorie M. Kohler, Yenking Wang, Barbara B. Baldwin, and Robert J. Wisner—1187
- Effects of electric dipole moment of electron on H energy levels, G. Feinberg—1637
- Frequency shift of zero-field hyperfine splitting of Cs^{133} produced by various buffer gases, M. Arditi and T. R. Carver—449
- General impact theory of pressure broadening, Michel Baranger—855
- Ground state of two-electron atoms, C. L. Pekeris—1649

Atomic Structure and Spectra (Continued)
K series x-ray wavelengths in rare earth elements, E. L. Chupp, J. W. M. DuMond, F. J. Gordon, R. C. Jopson, and Hans Mark—1183
Low even configurations in first spectrum of Re (Re I), Richard E. Trees—165
Magnetic moment of He in its $^3S_1$ metastable state, C. W. Drake, V. W. Hughes, A. Lurio, and J. A. White—1627
Narrow hyperfine absorption lines for Cs^{133} in various buffer gases, E. C. Beaty, P. L. Bender, and A. R. Chi—450
New techniques in Lamb shift calculation, H. M. Fried and D. R. Yennie—1391
Quenching of positronium lifetimes by molecular I_2, C. R. Hatcher and W. E. Millett—1924
Some atomic effects of electronic dipole moment, E. E. Salpeter—1642
Auger Effect (see **Atomic Structure and Spectra; X-Rays**)
Aurora (see **Astrophysics; Geophysics**)

Barkhausen Effect (see **Magnetic Properties**)
Biophysics
Boson Theory (see **Field Theory**)
Bremsstrahlung (see **Radiation**)
Broadening of Spectral Lines (see **Atomic Structure and Spectra; Molecular Structure and Spectra; Spectra, General**

Capture Cross Sections (see **Electrons and Positrons; Nuclear Reactions; Radiation**)
Čerenkov Effect (see **Radiation**)
Chemical Effects and Properties
Chemical Reactions (see **Chemical Effects and Properties**)
Chemiluminescence (see **Luminescence**)
Cold Emission (see **Electrical Properties**)
Colloids (see **Chemical Effects and Properties; Molecular Aggregates**)
Compton Effect (see **Radiation**)
Conductivity, Electrical (see **Electrical Conductivity and Resistance**)
Conductivity, Thermal (see **Thermal Properties**)
Constants, Standards, Units
Cosmic Radiation (see also **Mesons and Hyperons**)
Acceleration of cosmic radiation, G. S. Murty and R. K. Varma—1789
Electron number distribution in electron-photon showers, J. C. Butcher and H. Messel—2096
Energy spectrum of π mesons produced by interaction of cosmic radiation with emulsion nuclei, Herman Yagoda—2087
Flux of cosmic-ray particles with $Z \geq 2$ over Texas, A. Engler, M. F. Kaplon, and J. Klarmann—597
Interplanetary magnetic field and its control of cosmic-ray variations, J. H. Piddington—589
Production of He in Fe meteorites by action of cosmic rays, John H. Hoffman and Alfred O. Nier—2112
Some measurements of atmospheric neutrons, John D. Gabbe—497
Suprathermal particle production by binary stars, D. A. Tidman—1759
Unusual cosmic-ray intensity fluctuations observed at southern stations during October 21st–24th, 1957, K. G. McCracken and N. R. Parsons—1798
Variations in cosmic-ray nucleonic intensity, J. A. Lockwood—1750
Cosmology (see **Astrophysics; Relativity and Gravitation**)
Coulomb Excitation (see **Nuclear Reactions; Nuclear Spectra**)
Critical Potentials (see **Atomic Structure and Spectra; Molecular Structure and Spectra**)
Cross Section (see **Electrons and Positrons; Nuclear Reactions; Radiation; Scattering**)

Crystal Counters (see **Methods and Instruments**)
Crystalline State (see also **Electrical Properties; Imperfections in Solids; Magnetic Properties; Semiconductors; etc.**)
Analysis of galvanomagnetic de Haas-van Alphen type oscillations in graphite, D. E. Soule—708
Analysis of multicarrier galvanomagnetic data for graphite, J. W. McClure—715
Approximate wave functions for *U* center by point-ion-lattice method, Barry S. Gourary—337
Atomic force constants of Cu from Feynman's theorem, Harrison C. White—1092
Cohesive energy and wave functions for Rb, Joseph Callaway and Daniel F. Morgan, Jr.—334
Computation of principal components of asymmetric g tensor from paramagnetic resonance data, J. E. Geusic and L. Carlton Brown—64
Correlation of annihilation radiation in oriented single metal crystals, Stephan Berko and John S. Plaskett—1877
Dynamical theory of diffusion in crystals, Stuart A. Rice—804
Dynamics of interacting spin system, Robert T. Schumacher—837
Electron energy bands in Na, Joseph Callaway—322
Electron paramagnetic resonance of Mn^{++} in hexagonal ZnO and CdS single crystals, Paul B. Dorain—1058
Electron self-energy approach to correlation in degenerate electron gas, John J. Quinn and Richard A. Ferrell—812
Electron wave functions in metallic Cs, Joseph Callaway—1061
Energy-band interpolation scheme based on pseudopotential, James C. Phillips—685
Energy bands in solids—quantum defect method, Harvey Brooks and Frank S. Ham—344
Entropy of vacancies in ionic crystals, O. Theimer—1857
Fourier coefficients of crystal potentials, Joseph Callaway and M. L. Glasser—73
Fundamental absorption edge in CdS, David Dutton—785
Hall effect, magnetoresistance, and size effects in Cu, Ted G. Berlincourt—381
Influence of electron interactions on metallic properties, John G. Fletcher and David C. Larson—2139(E)
Influence of mass ratio on displacement cascades in diatomic solids, E. M. Baroody—1571
Inversion symmetry of *M* and *R* centers, A. W. Overhauser and H. Rüchardt—722
Lorentzian gas and hot electrons, I. Adawi—1567
Magnetic field dependence of Hall effect and magnetoresistance in graphite single crystals, D. E. Soule—698
Magnetic field dependence of ultrasonic attenuation in metals at low temperatures, Sergio Rodriquez—80
Magnetic structure and vacancy distribution in γ-Fe_2O_3 by neutron diffraction, G. A. Ferguson, Jr., and M. Hass—1130
Magnetic structure of Fe_4N, B. C. Frazer—751
Magnetic susceptibility of electron gas at high density, K. A. Brueckner and K. Sawada—328
Magnetocrystalline anisotropy constants of Fe at room temperature and below, C. D. Graham, Jr.—1117
Mechanical resonance dispersion in quartz at audio-frequencies, Edwin R. Fitzgerald—765
Mechanical resonance dispersion in single crystals, Edwin R. Fitzgerald—1063
New soluble energy band problem, Frederick L. Scarf—1137
Paramagnetic resonance study of Cu-doped AgCl, Ronald F. Tucker, Jr.—725
Some low-temperature properties of *R*, *M*, and *N* centers in KCl and NaCl, W. Dale Compton and Clifford C. Klick—1620
Spin-lattice relaxation time for I^{127} in KI, C. V. Briscoe and C. F. Squire—1540

Study of reactor-irradiated α-Al_2O_3, J. J. Antal and A. N. Goland—103
Symmetry of magnetic structures: magnetic structure of chalcopyrite, G. Donnay, L. M. Corliss, J. D. H. Donnay, N. Elliott, and J. M. Hastings—1917
Theory of contribution of excitons to complex dielectric constant of crystals, J. J. Hopfield—1555
Theory of cyclotron resonance in metals, Sergio Rodriquez—1616
Theory of dielectric constants of alkali halide crystals, B. G. Dick, Jr., and A. W. Overhauser—90
Theory of plasma resonance in solids, P. A. Wolff—66
Theory of solid Ne, A, Kr, and Xe at 0°, Newton Bernardes—1534
Thermal expansion of some crystals with diamond structure, D. F. Gibbons—136;—2139(E)
Thermoelectric power and electron scattering in metal alloys. II, C. A. Domenicali—1863
Transport in metals: effect of nonequilibrium phonons, M. Bailyn—1587
Two Hall effects of Fe-Co alloys, Frank P. Beitel, Jr., and Emerson M. Pugh—1516
Vacancy pairs in ionic crystals, A. B. Lidiard—54
Variation of elastic constants of crystalline Al with temperature between 63°K and 773°K, Paul M. Sutton—2139 (E)
X-ray diffraction and magnetic measurements of Fe-Cr spinels, W. D. Derbyshire and H. J. Yearian—1603

Diamagnetism (see **Magnetic Properties**)
Dielectrics and Dielectric Properties
Dielectric and thermal study of $(NH_4)_2SO_4$ and $(NH_4)_2BeF_4$ transitions, S. Hoshino, K. Vedam, Y. Okaya, and R. Pepinsky—405
Mechanical resonance dispersion in quartz at audio-frequencies, Edwin R. Fitzgerald—765
Mechanical resonance dispersion in single crystals, Edwin R. Fitzgerald—1063
Molecular theory of dielectric constant, Laurens Jansen—434
Piezoresistance constants of n-type InAs, A. J. Tuzzolino—30
Piezoresistance in n-type GaAs, A. Sagar—1533
Theory of contribution of excitons to complex dielectric constant of crystals, J. J. Hopfield—1555
Theory of dielectric constants of alkali halide crystals, B. G. Dick, Jr., and A. W. Overhauser—90
Transition to ferroelectric state in $BaTiO_3$, D. Meyerhofer—413
Velocity of sidewise 180° domain wall motion in $BaTiO_3$ as function of applied electric field, Robert C. Miller and Albert Savage—755
Diffraction (see also **Scattering**)
Antiferromagnetic properties of Fe group trifluorides, E. O. Wollan, H. R. Child, W. C. Koehler, and M. K. Wilkinson—1132
Magnetic structure and vacancy distribution in γ-Fe_2O_3 by neutron diffraction, G. A. Ferguson, Jr., and M. Hass—1130
Magnetic structure of Fe_4N, B. C. Frazer—751
X-ray diffraction and magnetic measurements of Fe-Cr spinels, W. D. Derbyshire and H. J. Yearian—1603
Diffusion
Dynamical theory of diffusion in crystals, Stuart A. Rice—804
Plasma oscillations with diffusion in velocity space, A. Lenard and Ira B. Bernstein—1456
Discharge of Electricity in Gases (see **Electrical Discharges**)
Disintegration and Excitation of Nucleus (see **Nuclear Reactions**)
Dynamics (see **Mechanics**)
Elasticity and Plasticity
Atomic force constants of Cu from Feynman's theorem, Harrison C. White—1092
Elastic constants of α-brasses. Room-temperature variation with solute concentration, John A. Rayne—1125
Elastic constants of KI and KCl, M. H. Norwood and C. V. Briscoe—45
Mechanical resonance dispersion in quartz at audio-frequencies, Edwin R. Fitzgerald—765
Mechanical resonance dispersion in single crystals, Edwin R. Fitzgerald—1063
Piezoresistance in n-type GaAs, A. Sagar—1533
Theory of solid Ne, A, Kr, and Xe at 0°K, Newton Bernardes—1534
Variation of elastic constants of crystalline Al with temperature between 63°K and 773°K, Paul M. Sutton—2139(E)
Electrical Breakdown (see **Dielectrics and Dielectric Properties; Electrical Discharges**)
Electrical Conductivity and Resistance (see also **Electrical Properties; Semiconductors; Superconductors**)
Analysis of galvanomagnetic de Haas-van Alphen type oscillations in graphite, D. E. Soule—708
Analysis of multicarrier galvanomagnetic data for graphite, J. W. McClure—715
Electrical conductivity of NiO near Curie temperature, Eiso Yamaka and Kenichi Sawamoto—1861
Hall effect, magnetoresistance, and size effects in Cu, Ted G. Berlincourt—381
Internal photoeffect and exciton diffusion in Cd and Zn sulfides, M. Balkanski and R. D. Waldron—123
Magnetic field dependence of Hall effect and magnetoresistance in graphite single crystals, D. E. Soule—698
Magnetoresistance in n-type Ge at low temperatures, R. A. Laff and H. Y. Fan—317
Magnetoresistance in PbS, PbSe, and PbTe at 295°, 77.4°, and 4.2°K, Robert S. Allgaier—828
Optical absorption and photoconductivity in MgO crystals, W. T. Peria—423
Photoconduction and surface effects with ZnO crystals, R. J. Collins and D. G. Thomas—388
Photoemissive, photoconductive, and optical absorption studies of alkali-antimony compounds, W. E. Spicer—114
Role of traps in photoelectromagnetic and photoconductive effects, R. N. Zitter—852
Surface transport theory, Jay N. Zemel—762
Theory of Hall effect in ferromagnetic substances, J. M. Luttinger—739
Transport in metals: effect of nonequilibrium phonons, M. Bailyn—1587
Two Hall effects of Fe-Co alloys, Frank P. Beitel, Jr., and Emerson M. Pugh—1516
Electrical Discharges
Beam-plasma interaction, D. W. Mahaffey, G. McCullagh, and K. G. Emeleus—1052
Conductivity of plasmas to microwaves, Edward A. Desloge, Steven W. Matthysse, and Henry Margenau—1437
Drift velocity of electrons in Hg vapor and Hg vapor-CO_2 mixtures, C. W. McCutchen—1848
Effect of space charge in cold-cathode gas discharges, A. L. Ward—1852
Hydromagnetic equations for two isotopes in completely ionized gas, Joseph Slepian—1441
Kinematics of growing waves, P. A. Sturrock—1488
Magnetically confined plasmas, A. C. Kolb—291
Microwave propagation in hot magneto-plasmas, J. E. Drummond—1460
Multipacting modes of high-frequency gaseous breakdown, Albert J. Hatch and H. Bartel Williams—681

Electrical Discharges (Continued)
Plasma oscillations with diffusion in velocity space, A. Lenard and Ira B. Bernstein—1456
Suprathermal particles. II, E. N. Parker and D. A. Tidman—1048; III. Electrons, E. N. Parker—1429
Thermal conductivity of electron gas in gaseous plasma, T. Sekiguchi and R. C. Herndon—1
Transverse plasma waves and plasma vortices, O. Buneman—1504
Electrical Properties (see also **Dielectrics and Dielectric Properties; Electrical Conductivity and Resistance; Semiconductors; Superconductors**)
Effect of magnetic field on thermionic emission from Mo, Joel Greenburg—1898
Low-energy sputtering yield in Hg, Gottfried K. Wehner—1120
Thermoelectric power and electron scattering in metal alloys. II, C. A. Domenicali—1863
Electrodynamics (see **Electromagnetic Theory and Electrodynamics**)
Electroluminescence (see **Luminescence**)
Electrolysis (see **Chemical Effects and Properties**)
Electromagnetic Theory and Electrodynamics (see also **Microwaves**)
Kinematics of growing waves, P. A. Sturrock—1488
Electron Diffraction (see **Diffraction; Scattering of Electrons and Positrons**)
Electron Optics (see **Electromagnetic Theory and Electrodynamics**)
Electronic Tubes (see **Methods and Instruments**)
Electrons and Positrons (see also **Electromagnetic Theory and Electrodynamics; Elementary Particle Interactions; Scattering of Electrons and Positrons**)
Correlation of annihilation radiation in oriented single metal crystals, Stephan Berko and John S. Plaskett—1877
Detection of $\boldsymbol{\sigma}\cdot\mathbf{E}$ energy shift in positronium formed from polarized positrons, Felix E. Obenshain and Lorne A. Page—179
Effects of electric dipole moment of electron on H energy levels, G. Feinberg—1637
Electron number distribution in electron-photon showers, J. C. Butcher and H. Messel—2096
Quenching of positronium lifetimes by molecular I_2, C. R. Hatcher and W. E. Millet—1924
Some atomic effects of electronic dipole moment, E. E. Salpeter—1642
Temperature effect on positron annihilation in condensed matter, R. L. de Zafra and W. T. Joyner—19
Wide-angle pair production and quantum electrodynamics at small distances, J. D. Bjorken, S. D. Drell, and S. C. Frautschi—1409
Electrons, Mobility (see **Ions and Electrons, Mobility**)
Electrons, Scattering of (see **Scattering of Electrons and Positrons**)
Electrons, Secondary (see **Electrical Properties**)
Electrons, Thermionic (see **Electrical Properties**)
Electro-Optical Effects (see **Optical Properties**)
Electrostriction (see **Dielectrics and Dielectric Properties**)
Elementary Particle Interactions
Antiproton-proton cross sections at 133, 197, 265, and 333 Mev, Charles A. Coombes, Bruce Cork, William Galbraith, Glen R. Lambertson, and William A. Wenzel—1303
Charge properties of K-meson and hyperon decay interaction, R. F. Sawyer—2135
Charge symmetry of weak interactions, Steven Weinberg—1375
Cross sections for associated production by protons, David Berley and George B. Collins—614
Decay modes of $(\theta+\bar{\theta})$ system, M. Goldhaber, T. D. Lee, and C. N. Yang—1796
Determination of pion-nucleon scattering amplitude from dispersion relations and unitarity. General theory, S. Mandelstam—1344
Discrepancy between π^--proton scattering and dispersion equation, Howard J. Schnitzer and George Salzman—1802
Effects of electric dipole moment of electron on H energy levels, G. Feinberg—1637
Electromagnetic effects in meson-nucleon scattering, R. A. Sorensen—1813
Electromagnetic structure of nucleon, P. Federbush, M. L. Goldberger, and S. B. Treiman—642
Electron-deuteron scattering by impulse approximation, A. Goldberg—618
Electron scattering from deuteron and neutron-proton potential, John A. McIntyre and George R. Burleson—2077
Example of production of π^- meson by K^+ meson, E. Helmy, J. H. Mulvey, D. J. Prowse, and D. H. Stork—1793
Helicity of electron and positron in muon decay, Pierre C. Macq, Kenneth M. Crowe, and Roy P. Haddock—2061
Interaction current in strangeness-violating decays, S. Okubo, R. E. Marshak, E. C. G. Sudarshan, W. B. Teutsch, and S. Weinberg—665
Internal pairs in capture of π^- by protons, Ronald M. Rockmore and John G. Taylor—992
Inverse β decay and two-component neutrino, R. W. King and J. F. Perkins—963
K_{e3} and $K_{\mu 3}$ decay modes, M. Sugawara—2128
Leptonic decay modes of hyperons, F. Eisler, R. Plano, A. Prodell, N. Samios, M. Schwartz, J. Steinberger, M. Conversi, P. Franzini, I. Manelli, R. Stangelo, and V. Silvestrini—979
Meson exchange effects in two-nucleon states, R. E. Cutkosky—1027
Negative K-meson reactions with protons: masses of charged Σ hyperons and negative K meson, Walter H. Barkas, John N. Dyer, Peter C. Giles, Harry H. Heckman, Conrad J. Mason, Norris A. Nickols, and Frances M. Smith—622
Neutral vector meson and nucleon form factors and magnetic moments, Robert W. Huff—1021
Nuclear spin-electron-neutrino correlation in forbidden β decay, Adam M. Bincer—244
Photoproduction of K^+ mesons in hydrogen, P. L. Donoho and R. L. Walker—981
Photoproduction of neutral pions from H in energy range 700–1100 Mev, H. H. Bingham and A. B. Clegg—2053
π^+-mesonic decay of hyperfragment, J. Schneps—1335
π^+-p interactions in energy range around 500 Mev, M. E. Blevins, M. M. Block, and J. Leitner—1287
Pion-hyperon scattering and K^--p reactions, Marc Ross—986
Production of strange particles and antiparticles in nuclear interactions of very high energy ($E\sim 10^{13}$ ev), E. Lohrmann and M. W. Teucher—587
Proposal for determining pion-nucleon coupling constant from angular distribution for nucleon-nucleon scattering, Geoffrey F. Chew—1380
Radiative corrections to muon and neutron decay, S. M. Berman—267
Relative parity of charged and neutral K-particles, A. Pais—624
Relativistic field theory of unstable particles, P. T. Matthews and Abdus Salam—283
Some atomic effects of electronic dipole moment, E. E. Salpeter—1642

Test of nature of vector interaction in β-decay, Murray Gell-Mann—2139(E)
Tests for spin in decay of particles of arbitrary spin, Loyal Durand, III, Leon F. Landovitz, and Jack Leitner—273
Two-pair decay and spin of neutral pion, David W. Joseph—2107
Yields of K^+ and K^- mesons produced by 1.7- to 3-Bev protons, J. Hornbostel, E. O. Salant, and G. T. Zorn—1311

Elements (see **Atomic Mass and Abundance**)
Energy Loss of Particles (see **Range and Energy Loss**)
Energy States of Atoms (see **Atomic Structure and Spectra**)
Energy States of Molecules (see **Molecular Structure and Spectra**)
Energy States of Nucleus (see **Nuclear Reactions; Nuclear Spectra; Nuclear Structure Theory**)
Equations of State (see **Chemical Effects and Properties**)
Errata
Excitation of spin waves in ferromagnet by uniform rf field, C. Kittel—2139(E)
Influence of electron interactions on metallic properties, John G. Fletcher and David C. Larson—2139(E)
Radiations of Os^{193} and Os^{191}, V. S. Dubey, S. S. Malik, C. E. Mandeville, and Ambuj Mukerji—2139(E)
Studies of decay schemes in Os-Ir region. I. Isomers Os^{190m} (10 min) and Os^{189m} (5.7 hr), G. Scharff-Goldhaber, D. E. Alburger, G. Harbottle, and M. McKeown—2139(E)
Test of nature of vector interaction in β-decay, Murray Gell-Mann—2139(E)
Thermal expansion of some crystals with diamond structure, D. F. Gibbons—2139(E)
Transport equation in quantum gases, Hazime Mori and John Ross—2139(E)
Variation of elastic constants of crystalline Al with temperature between 63°K and 773°K, Paul M. Sutton—2139(E)
Errors of Measurement (see **Methods and Instruments**)
Evaporation (see **Liquids**)
Excitation of Atoms (see **Atomic Structure and Spectra**)
Excitation of Molecules (see **Molecular Structure and Spectra**)
Excitation of Nucleus (see **Nuclear Reactions; Nuclear Spectra; Nuclear Structure Theory**)
Explosion Phenomena (see **Fluid Dynamics**)

Faraday Effect (see **Optical Properties**)
Ferroelectric Phenomena (see **Dielectrics and Dielectric Properties**)
Ferromagnetism (see **Magnetic Properties**)
Field Emission (see **Electrical Properties**)
Field Theory (see also **Quantum Electrodynamics**)
Charge properties of K meson and hyperon decay interaction, R. F. Sawyer—2135
Charge symmetry of weak interactions, Steven Weinberg—1375
Determination of pion-nucleon scattering amplitude from dispersion relations and unitarity. General theory, S. Mandelstam—1344
Discrepancy between π^--proton scattering and dispersion equation, Howard J. Schnitzer and George Salzman—1802
Dispersion relation for nonrelativistic potential scattering, Benjamin W. Lee—2122
Electromagnetic effects in meson-nucleon scattering, R. A. Sorensen—1813
Electromagnetic structure of nucleon, P. Federbush, M. L. Goldberger, and S. B. Treiman—642
Elimination of ghosts in propagators, P. J. Redmond—1404
Generalized reaction matrix approach to theory of infinite medium of fermions, Richard Prange and Abraham Klein—1008
Green's functions for particles of arbitrary spin, Joseph David Harris—2124
Meson exchange effects in two-nucleon states, R. E. Cutkosky—1027
Neutral vector meson and nucleon form factors and magnetic moments, Robert W. Huff—1021
Perturbation theory for infinite medium of fermions, Abraham Klein and Richard Prange—994
Proposal for determining pion-nucleon coupling constant from angular distribution for nucleon-nucleon scattering, Geoffrey F. Chew—1380
Quantum field theories with composite particles and asymptotic conditions, R. Haag—669
Relativistic field theory of unstable particles, P. T. Matthews and Abdus Salam—283
Superpotentials for generally covariant field theory, James L. Anderson—1826
Test of nature of vector interaction in β-decay, Murray Gell-Mann—2139(E)
Tests for spin in decay of particles of arbitrary spin, Loyal Durand, III, Leon F. Landovitz, and Jack Leitner—273
Theory of radiative damping in stationary states, C. A. Mead—1843
Films, Properties
Fundamental optical absorption in MgO, Gilbert H. Reiling and Eugene B. Hensley—1106
Fine Structure (see **Atomic Structure and Spectra**)
Fission of Nucleus (see **Nuclear Fission**)
Fluctuation Phenomena (see **Noise**)
Fluid Dynamics
Hydromagnetic equations for two isotopes in completely ionized gas, Joseph Slepian—1441
Magnetically confined plasmas, A. C. Kolb—291
Plasma oscillations with diffusion in velocity space, A. Lenard and Ira B. Bernstein—1456
Quantum theory of surface energy and tension, R. Brout and M. Nauenberg—1451
Statistical-mechanical theory of transport in fluids, Hazime Mori—1829
Transverse plasma waves and plasma vortices, O. Buneman—1504
Fluorescence (see **Luminescence**)
Friction (see **Mechanics**)

Galvanomagnetic Effect (see **Magnetic Properties**)
Gamma Rays (see also **Nuclear Reactions; Nuclear Spectra; Radiation; Range and Energy Loss**)
Elastic scattering of 1.6-Mev γ rays from H, Li, C, and Al nuclei, Luis W. Alvarez, Frank S. Crawford, Jr., and M. Lynn Stevenson—1267
Precision determination of γ rays following $(p,p'\gamma)$ and $(p,n\gamma)$ reactions, E. L. Chupp, J. W. M. DuMond, F. J. Gordon, R. C. Jopson, and Hans Mark—532
Gases
Hydromagnetic equations for two isotopes in completely ionized gas, Joseph Slepian—1441
Magnetic susceptibility of electron gas at high density, K. A. Brueckner and K. Sawada—328
Molecular theory of dielectric constant, Laurens Jansen—434
Thermal conductivity of electron gas in gaseous plasma, T. Sekiguchi and R. C. Herndon—1
Transport equation in quantum gases, Hazime Mori and John Ross—2139(E)
Geophysics
Suprathermal particles. III. Electrons, E. N. Parker—1429
Glasses (see **Molecular Aggregates**)
Gravitation (see **Relativity and Gravitation**)
Gyromagnetization (see **Magnetic Properties**)

Hall Effect (see **Electrical Conductivity and Resistance; Semiconductors**)
Heat Capacity (see **Thermal Properties**)
Heat Conduction (see **Thermal Properties**)
Heat of Dissociation and Formation (see **Molecular Structure and Spectra**)
Heat of Fusion (see **Thermal Properties**)
Heat of Vaporization (see **Thermal Properties**)
Helium, Liquid
Angular momentum of liquid He, R. H. Walmsley and C. T. Lane—1041
Excitation of rotons in He II by cold neutrons, Harry Palevsky, K. Otnes, and K. E. Larsson—11
Quantum theory of surface energy and tension, R. Brout and M. Nauenberg—1451
Thermal excitations in liquid He^3, Louis Goldstein—1465
Volume anomaly of liquid He^3 arising from its nuclear spin system, Louis Goldstein—1483
High-Voltage Tubes and Machines (see **Methods and Instruments**)
Hydrodynamics (see **Fluid Dynamics**)
Hyperfine Structure (see **Atomic Structure and Spectra; Molecular Structure and Spectra; Nuclear Moments and Spin**)
Hyperons (see **Mesons and Hyperons**)

Imperfections in Solids (see also **Crystalline State; Electrical Conductivity and Resistance; Luminescence; Semiconductors**)
α-particle irradiation of Ge at 4.2°K, G. W. Gobeli—732
Approximate wave functions of U center by point-ion-lattice method, Barry S. Gourary—337
Dynamical theory of diffusion in crystals, Stuart A. Rice—804
Entropy of vacancies in ionic crystals, O. Theimer—1857
Internal photoeffect and exciton diffusion in Cd and Zn sulfides, M. Balkanski and R. D. Waldron—123
Inversion symmetry of M and R centers, A. W. Overhauser and H. Rüchardt—722
Magnetic structure and vacancy distribution in γ-Fe_2O_3 by neutron diffraction, F. A. Ferguson, Jr., and M. Hass—1130
Optical absorption and photoconductivity in MgO crystals, W. T. Peria—423
Paramagnetic resonance study of Cu-doped AgCl, Ronald F. Tucker, Jr.—725
Radiation-induced changes of dimensions, index of refraction, and dispersion of LiF, William Primak—1075
Re-examination of paramagnetic resonance of Np^{239}, M. Abraham, C. D. Jeffries, R. W. Kedzie, and J. C. Wallmann—553
Role of traps in photoelectromagnetic and photoconductive effects, R. N. Zitter—852
Some low-temperature properties of R, M, and N centers in KCl and NaCl, W. Dale Compton and Clifford C. Klick—1620
Study of reactor-irradiated α-Al_2O_3, J. J. Antal and A. N. Goland—103
Surface effects in electron-irradiated Ge at 80°K, Walter E. Spear—362
Vacancy pairs in ionic crystals, A. B. Lidiard—54
Inelastic Scattering (see **Nuclear Reactions; Scattering**)
Instruments (see **Methods and Instruments**)
Internal Conversion (see **Nuclear Spectra**)
Ionization (see also **Electrical Discharges; Range and Energy Loss**)
Collisions of electrons with H atoms. I. Ionization, Wade L. Fite and R. T. Brackmann—1141
Ionization Potentials of Atoms (see **Atomic Structure and Spectra**)
Ionization Potentials of Molecules (see **Molecular Structure and Spectra**)
Ionosphere (see **Geophysics**)
Ions (see also **Electrical Discharges**)
Charge exchange in proton-H-atom collisions, Wade L. Fite, R. Theodore Brackmann, and William R. Snow—1161
Dissociation of H_2 molecule ion by electron impact, Eugene V. Ivash—155
Low-energy sputtering yield in Hg, Gottfried K. Wehner—1120
Photodetachment of O_2^-, D. S. Burch, S. J. Smith, and L. M. Branscomb—171
Suprathermal particles. II, E. N. Parker and D. A. Tidman—1048
Theory of threshold energy dependence of photodetachment of diatomic molecular negative ions, Sydney Geltman—176
Ions and Electrons, Mobility (see also **Semiconductors**)
Analysis of multicarrier galvanomagnetic data for graphite, J. W. McClure—715
Hall mobility of carriers in impure nondegenerate semiconductors, M. S. Sodha and P. C. Eastman—44
Interaction energy and mobility of Li^+ ions in He, E. A. Mason, H. W. Schamp, Jr., and J. T. Vanderslice—445
Lorentzian gas and hot electrons, I. Adawi—1567
Magnetic field dependence of Hall effect and magnetoresistance in graphite single crystals, D. E. Soule—698
Isobars (see **Atomic Mass and Abundance**)
Isomers, Molecular (see **Molecular Structure and Spectra**)
Isomers, Nuclear (see **Nuclear Spectra**)
Isotopes (see **Atomic Mass and Abundance; Radioactivity**)

Kerr Effect (see **Optical Properties**)
Kinetic Theory of Gases (see **Gases**)

Liquid Helium (see **Helium, Liquid**)
Liquids
Luminescence

Magnetic Fields (see **Electromagnetic Theory and Electrodynamics**)
Magnetic Properties
Analysis of galvanomagnetic de Haas-van Alphen type oscillations in graphite, D. E. Soule—708
Antiferromagnetic properties of Fe group trifluorides, E. O. Wollan, H. R. Child, W. C. Koehler, and M. K. Wilkinson—1132
Antiferromagnetism of $CuF_2 \cdot 2H_2O$, G. S. Verma and K. Tokunaga—1521
Evidence for antiferromagnetism in $Cu_3(CO_3)_2(OH)_2$, R. D. Spence and R. D. Ewing—1544
Excitation of spin waves in ferromagnet by uniform rf field, C. Kittel—2139(E)
Linear antiferromagnetic chain with anisotropic coupling, R. Orbach—309
Low-temperature transition of magnetic anisotropy in Ni-Fe ferrite, Norman Menyuk and Kirby Dwight—397
Magnetic anisotropy constant of yttrium iron garnet at 0°K, B. R. Cooper—395
Magnetic properties of Tb metal, W. C. Thoburn, S. Legvold, and F. H. Spedding—56
Magnetic structure and vacancy distribution in γ-Fe_2O_3 by neutron diffraction, G. A. Ferguson, Jr., and M. Hass—1130
Magnetic structure of Fe_4N, B. C. Frazer—751
Magnetic susceptibility of electron gas at high density, K. A. Brueckner and K. Sawada—328
Magnetization curves of superconductive Sn alloys, E. A. Lynton and B. Serin—70

Magnetization studies and possible magnetic structure of $BaO \cdot 6Fe_2O_3$, Warren E. Henry—326
Magnetocrystalline anisotropy constants of Fe at room temperature and below, C. D. Graham, Jr.—1117
Magnetostatic modes in ferrimagnetic spheres, J. F. Dillon, Jr.—59
Superconductivity and ferromagnetism in isomorphous compounds, B. T. Matthias, E. Corenzwit, and W. H. Zachariasen—89
Symmetry of magnetic structures: magnetic structure of chalcopyrite, G. Donnay, L. M. Corliss, J. D. H. Donnay, N. Elliott, and J. M. Hastings—1917
Theory of Hall effect in ferromagnetic substances, J. M. Luttinger—739
Two Hall effects of Fe-Co alloys, Frank P. Beitel, Jr., and Emerson M. Pugh—1516
X-ray diffraction and magnetic measurements of Fe-Cr spinels, W. D. Derbyshire and H. J. Yearian—1603

Magnetic Resonance (see also **Nuclear Moments and Spin**)
Computation of principal components of asymmetric g tensor from paramagnetic resonance data, J. E. Geusic and L. Carlton Brown—64
Dynamics of interacting spin system, Robert T. Schumacher—837
Electron paramagnetic resonance of Mn^{++} in hexagonal ZnO and CdS single crystals, Paul B. Dorain—1058
Electron spin resonance of atomic and molecular free radicals trapped at liquid He temperature, C. K. Jen, S. N. Foner, E. L. Cochran, and V. A. Bowers—1169
Excitation of spin waves in ferromagnet by uniform rf field, C. Kittel—2139(E)
Frequency shift of zero-field hyperfine splitting of Cs^{133} produced by various buffer gases, M. Arditi and T. R. Carver—449
Hfs separations and magnetic moments of Cs^{127}, Cs^{129}, Cs^{130}, and Cs^{132}, William A. Nierenberg, Howard A. Shugart, Henry B. Silsbee, and R. J. Sunderland—186
Infrared and optical masers, A. L. Schawlow and C. H. Townes—1940
Magnetic moment of He in its $^3S_1$ metastable state, C. W. Drake, V. W. Hughes, A. Lurio, and J. A. White—1627
Magnetic resonance line shapes at onset of saturation, D. F. Holcomb—1599
Magnetostatic modes in ferrimagnetic spheres, J. F. Dillon, Jr.—59
Multiple quantum transitions in paramagnetic resonance, P. P. Sorokin, I. L. Gelles, and W. V. Smith—1513
Narrow hyperfine absorption lines for Cs^{133} in various buffer gases, E. C. Beaty, P. L. Bender, and A. R. Chi—450
Nuclear magnetic resonance in cerous magnesium nitrate at temperatures below 1°K, T. L. Estle, H. R. Hart, Jr., and J. C. Wheatley—1576
Paramagnetic resonance study of Cu-doped AgCl, Ronald F. Tucker, Jr.—725
Radio-frequency orientation of Sb^{122}, Francis M. Pipkin—935
Radio-frequency spectra of HD in strong magnetic fields, W. E. Quinn, J. M. Baker, J. T. LaTourrette, and N. F. Ramsey—1929
Re-examination of paramagnetic resonance of Np^{239}, M. Abraham, C. D. Jeffries, R. W. Kedzie, and J. C. Wallmann—553
Spin-lattice relaxation time for I^{127} in KI, C. V. Briscoe and C. F. Squire—1540
Spin rotational constant of H_2, G. E. Tauber—866
Steady-state free precession in nuclear magnetic resonance, H. Y. Carr—1694
Theory of cyclotron resonance in metals, Sergio Rodriguez—1616
Theory of plasma resonance in solids, P. A. Wolff—66

Magnetohydrodynamics (see **Fluid Dynamics**)
Magneto-Optical Effects (see **Optical Properties**)
Magnetoresistance (see **Electrical Conductivity and Resistance; Semiconductors**)
Magnetostriction (see **Magnetic Properties**)
Mass Defects (see **Atomic Mass and Abundance**)
Mass Spectroscopy (see **Atomic Mass and Abundance; Methods and Instruments**)
Mathematical Methods
Application of perturbation methods to theory of nuclear matter, D. J. Thouless—906
Measurements (see **Methods and Instruments**)
Mechanics
General relativity and particle dynamics, L. H. Thomas—2129
Mechanics, Quantum—Atomic Structure and Spectra (see **Atomic Structure and Spectra**)
Mechanics, Quantum—General (see **Quantum Mechanics**)
Mechanics, Quantum—Molecular Structure and Spectra (see **Molecular Structure and Spectra**)
Mechanics, Quantum—Nuclear (see **Nuclear Structure Theory**)
Mechanics, Quantum—of Solid Bodies (see **Crystalline State**)
Mechanics, Statistical (see **Statistical Mechanics and Thermodynamics**)
Meson Field Theory (see **Field Theory**)
Mesons and Hyperons (see also **Cosmic Radiation; Elementary Particle Interactions; Nuclear Reactions Induced by Mesons and Hyperons; Scattering of Mesons and Hyperons**)
Charge properties of K meson and hyperon decay interaction, R. F. Sawyer—2135
Cross sections for associated production by protons, David Berley and George B. Collins—614
Decay modes of $(\theta+\bar{\theta})$ system, M. Goldhaber, T. D. Lee, and C. N. Yang—1796
Depolarization of positive muons in condensed matter, Robert A. Swanson—580
Energy spectrum of π mesons produced by interaction of cosmic radiation with emulsion nuclei, Herman Yagoda—2087
Example of production of π^- meson by K^+ meson, E. Helmy, J. H. Mulvey, D. J. Prowse, and D. H. Stork—1793
Experimental results on radiative π-μ decay, C. Castagnoli and M. Muchnik—1779
Helicity of electron and positron in muon decay, Pierre C. Macq, Kenneth M. Crowe, and Roy P. Haddock—2061
Hyperfragments produced by K^0 mesons from K^+ charge exchange, M. Baldo-Ceolin, H. Huzita, S. Natali, U. Camerini, and W. F. Fry—2118
Interaction current in strangeness-violating decays, S. Okubo, R. E. Marshak, E. C. G. Sudarshan, W. B. Teutsch, and S. Weinberg—665
Internal pairs in capture of π^- by protons, Ronald M. Rockmore and John G. Taylor—992
$K_{\nu 3}$ and $K_{\mu 3}$ decay modes, M. Sugawara—2128
Leptonic decay modes of hyperons, F. Eisler, R. Plano, A. Prodell, N. Samios, M. Schwartz, J. Steinberger, M. Conversi, P. Franzini, I. Manelli, R. Stangelo, and V. Silvestrini—979
Negative K-meson reactions with protons: masses of charged Σ hyperons and negative K meson, Walter H. Barkas, John N. Dyer, Peter C. Giles, Harry H. Heckman, Conrad J. Mason, Norris A. Nickols, and Frances M. Smith—622
Neutral decay modes of θ_1^0 and Λ^0, Elihu Boldt, Herbert S. Bridge, David O. Caldwell, and Yash Pal—1746

Mesons and Hyperons (Continued)
Neutron emission following μ-meson capture in Ag and Pb, Selig N. Kaplan, Burton J. Moyer, and Robert V. Pyle—968
Parity nonconservation in decay of free and bound Λ particles, R. H. Dalitz—605
Photoproduction of K^+ mesons in hydrogen, P. L. Donoho and R. L. Walker—981
Photoproduction of neutral pions from H in energy range 700–1100 Mev, H. H. Bingham and A. B. Clegg—2053
π^+-mesonic decay of hyperfragment, J. Schneps—1335
Production of Auger electrons by negative K meson and π mesons, Elizabeth B. Chesick and J. Schneps—1810
Production of strange particles and antiparticles in nuclear interactions of very high energy ($E\sim10^{13}$ ev), E. Lohrmann and M. W. Teucher—587
Radiative corrections to muon and neutron decay, S. M. Berman—267
Relative parity of charged and neutral K-particles, A. Pais—624
Tests for spin in decay of particles of arbitrary spin, Loyal Durand, III, Leon F. Landovitz, and Jack Leitner—273
Two-pair decay and spin of neutral pion, David W. Joseph—2107
Yields of K^+ and K^- mesons produced by 1.7- to 3-Bev protons, J. Hornbostel, E. O. Salant, and G. T. Zorn—1311
Metals (see **Crystalline State**)
Metastable Atoms (see **Atomic Structure and Spectra**)
Metastable Molecules (see **Molecular Structure and Spectra**)
Meteorology (see **Geophysics**)
Methods and Instruments
Infrared and optical masers, A. L. Schawlow and C. H. Townes—1940
Microwaves (see also **Atomic Structure and Spectra; Magnetic Resonance; Molecular Structure and Spectra; Nuclear Moments and Spin**)
Conductivity of plasmas to microwaves, Edward A. Desloge, Steven W. Matthysse, and Henry Margenau—1437
Microwave propagation in hot magneto-plasmas, J. E. Drummond—1460
Theory of cyclotron resonance in metals, Sergio Rodriguez—1616
Miscellaneous
Mobility of Ions and Electrons (see **Ions and Electrons, Mobility**)
Molecular Aggregates
Molecular Beams (see **Atomic and Molecular Beams**)
Molecular Structure and Spectra
Dissociation of H_2 molecule ion by electron impact, Eugene V. Ivash—155
Measurement of atomic and molecular excitation by a trapped-electron method, C. J. Schulz—150
Photodetachment of O_2^-, D. S. Burch, S. J. Smith, and L. M. Branscomb—171
Radio-frequency spectra of HD in strong magnetic fields, W. E. Quinn, J. M. Baker, J. T. LaTourrette, and N. F. Ramsey—1929
Spin rotational constant of H_2, G. E. Tauber—866
Theory of threshold energy dependence of photodetachment of diatomic molecular negative ions, Sydney Geltman—176
Moments, Nuclear (see **Nuclear Moments and Spin**)
Moments of Molecules (see **Molecular Structure and Spectra**)
Muonium (see **Atomic Structure and Spectra; Mesons and Hyperons**)
Neutrinos and Antineutrinos (see also **Nuclear Spectra; Radioactivity**)
Inverse β decay and two-component neutrino, R. W. King and J. F. Perkins—963
Nuclear spin-electron-neutrino correlation in forbidden β decay, Adam M. Bincer—244
Neutron Diffraction (see **Diffraction; Scattering of Neutrons**)
Neutrons (see **Elementary Particle Interactions**)
Noise
Nuclear Fission
Angular distributions in fission induced by α particles, deuterons, and protons, C. T. Coffin and I. Halpern—536
Delayed neutrons from spontaneous fission of Cf^{252}, S. Cox, P. Fields, A. Friedman, R. Sjoblom, and A. Smith—960
Nuclear Forces (see **Elementary Particle Interactions; Field Theory; Nuclear Structure Theory**)
Nuclear Induction (see **Magnetic Resonance; Nuclear Moments and Spin**)
Nuclear Isomers (see **Nuclear Spectra; Radioactivity**)
Nuclear Moments and Spin
Hfs separations and magnetic moments of Cs^{127}, Cs^{129}, Cs^{130}, and Cs^{132}, William A. Nierenberg, Howard A. Shugart, Henry B. Silsbee, and R. J. Sunderland—186
Radio-frequency orientation of Sb^{122}, Francis M. Pipkin—935
Re-examination of paramagnetic resonance of Np^{239}, M. Abraham, C. D. Jeffries, R. W. Kedzie, and J. C. Wallmann—553
Nuclear Photoeffects
Differential cross sections for photodisintegration of deuteron at far forward and backward angles, C. A. Tatro, T. R. Palfrey, R. M. Whaley, and R. O. Haxby—932
γ-ray absorption in carbon, Milo M. Wolff and William E. Stephens—890
Photoexcitation of Pb^{207m}, U. Farinelli, F. Ferrero, R. Malvano, S. Menardi, and E. Silva—1994
Photoneutron yields in rare-earth region, E. G. Fuller, B. Petree, and M. S. Weiss—554
Photoproduction of K^+ mesons in hydrogen, P. L. Donoho and R. L. Walker—981
Photoproduction of neutral pions from H in energy range 700–1100 Mev, H. H. Bingham and A. B. Clegg—2053
Splitting of giant resonance for deformed nuclei, E. G. Fuller and M. S. Weiss—560
Nuclear Reactions, General (see also **Elementary Particle Interactions; Scattering**)
Be^7 nuclei as evaporated particles in high-energy reactions, J. Hudis and J. M. Miller—1322
Inelastic scattering from light nuclei—α-particle model for Be^9, J. S. Blair and E. M. Henley—2029
Reactions of U^{238} with C ions, Torbjørn Sikkeland, Stanley G. Thompson, and Albert Ghiorso—543
Semiclassical treatment of direct nuclear reactions, S. T. Butler, N. Austern, and C. Pearson—1227
Nuclear Reactions Induced by α Particles and He^3 (see also **Scattering of α Particles**)
Energy levels in F^{18} from $N^{14}(\alpha,\alpha)N^{14}$ and $N^{14}(\alpha,p)O^{17}$ reactions, E. Kashy, P. D. Miller, and J. R. Risser—547
$N^{14}(\alpha,\alpha)N^{14}$ and $N^{14}(\alpha,p)O^{17}$ differential cross sections, D. F. Herring, Ren Chiba, B. R. Gasten, and H. T. Richards—1210
Search for electric monopole pairs from 7.6-Mev state of C^{12}, T. H. Kruse and R. D. Bent—931
Nuclear Reactions Induced by Deuterons and Tritons (see also **Scattering of Deuterons and Tritons**)
Angular distributions from deuteron bombardment of Be and B, B. Zeidman and J. M. Fowler—2020
Boron plus deuteron reactions, R. W. Kavanagh and C. A. Barnes—503

Excited states of Cu^{64} and Cu^{66}, R. P. de Figueiredo, M. Mazari, and W. W. Buechner—873
Excited states of V^{51} and Cr^{53}, M. Mazari, W. W. Buechner, and A. Sperduto—1692
First excited state of B^{11} and spin-flip stripping, J. E Bowcock—923
γ-ray threshold method and $O^{18}(d,n\gamma)F^{19}$ reaction, J. W. Butler and H. D. Holmgren—461
$N^{14}(d,n)O^{15}$ and $N^{15}(d,n)O^{16}$ reactions, J. L. Weil and K. W. Jones—1975
Polarization of protons from $C^{12}(d,p)C^{13}$ reaction with deuterons of 1060 kev, Mira K. Jurié and Silva D. Čirilov—1224
Proton angular distributions from $Zn^{64,66,67,68}(d,p)$ reactions, F. B. Shull and A. J. Elwyn—1667

Nuclear Reactions Induced by Mesons and Hyperons (see also **Elementary Particle Interactions; Mesons and Hyperons; Scattering of Mesons and Hyperons**)
Neutron emission following μ-meson capture in Ag and Pb, Selig N. Kaplan, Burton J. Moyer, and Robert V. Pyle—968

Nuclear Reactions Induced by Neutrons (see also **Elementary Particle Interactions; Scattering of Neutrons**)
Compound nucleus processes for reaction $U^{235}+n$, E. R. Rae, B. Margolis, and E. S. Troubetzkoy—492
$Li^6(n,t)He^4$ cross section for 12.5- to 18.3-Mev neutrons, Bernard D. Kern and William E. Kreger—926
Neutron activation cross section at 25 kev, Rex Booth, William P. Ball, and Malcolm H. MacGregor—226
Neutron nonelastic cross-section measurements on carbon, M. H. MacGregor and Rex Booth—486
Neutron scattering at 2.2 Mev by time of flight, H. H Landon, A. J. Elwyn, G. N. Glasoe, and S. Oleksa—1192
(n,t) cross sections for B^{10}, B^{11}, and Be^9, Marvin E. Wyman, Edward M. Fryer, and Munson M. Thorpe—1264
Resonance theory of neutron cross sections of fissionable nuclei, Erich Vogt—203
Slow neutron resonances in U^{235}, F. J. Shore and V. L. Sailor—191
Two new promethium isotopes; cross sections of some Sm isotopes for 14.8-Mev neutrons, R. G. Wille and R. W. Fink—1950
$U^{238}(n,2n)U^{237}$ cross section from 6 to 10 Mev, J. D. Knight, R. K. Smith, and B. Warren—259

Nuclear Reactions Induced by Protons (see also **Elementary Particle Interactions; Scattering of Protons**)
Angular distributions of elastically and inelastically scattered protons from In, R. D. Sharp and W. W. Buechner—897
Be^7 nuclei as evaporated particles in high-energy reactions, J. Hudis and J. M. Miller—1322
Elastic and inelastic scattering of protons by N^{14}, J. W. Olness, J. Vorona, and H. W. Lewis—475
Excited states of V^{51} and Cr^{53}, M. Mazari, W. W. Buechner, and A. Sperduto—1692
Experimental range of protons in Al, Hans Bichsel—1089
Formation of Be^7 in interactions of various nuclei with high-energy protons, E. Baker, G. Friedlander, and J. Hudis—1319
γ radiation from $Al^{27}+p$ and $F^{19}+p$, W. A. Ranken, T. W. Bonner, R. Castillo-Bahena, M. V. Harlow, Jr., and T. A. Rabson—239
Levels in Cr^{50}, Cr^{52}, Cr^{53}, Cr^{54}, W. C. Porter, D. M. Van Patter, M. A. Rothman, and C. E. Mandeville—468
Levels of Cl^{33} from $S^{32}(p,p)S^{32}$ and $S^{32}(p,p'\gamma)S^{32}$, J. W. Olness, W. Haeberli, and H. W. Lewis—1702
Measurements of interaction of 95-Mev protons with He^4, W. Selove and J. M. Teem—1658
$N^{15}(p,n)O^{15}$ reaction study, K. W. Jones, L. J. Lidofsky, and J. L. Weil—1252
(p,α) reactions induced by 23-Mev protons, Clyde B. Fulmer and Bernard L. Cohen—1672
(p,pn) reactions at proton energies from 0.3 to 3.0 Bev, Samuel S. Markowitz, F. S. Rowland, and G. Friedlander—1295
Precision determination of γ rays following $(p,p'\gamma)$ and $(p,n\gamma)$ reactions, E. L. Chupp, J. W. M. DuMond, F. J. Gordon, R. C. Jopson, and Hans Mark—532
Search for $0^-\rightarrow 0^+$ pair transition in O^{16}, K. E. Eklund and R. D. Bent—488
Study of some (p,n) reactions by neutron time of flight, A. J. Elwyn, H. H. Landon, Sophie Oleksa, and G. N. Glasoe—1200
Yields of K^+ and K^- mesons produced by 1.7- to 3-Bev protons, J. Hornbostel, E. O. Salant, and G. T. Zorn—1311

Nuclear Scattering (see **Scattering**)

Nuclear Spectra (see also **Nuclear Reactions; Radioactivity**)
Ag^{110m} decay, E. G. Funk, Jr., and M. L. Wiedenbeck—1247
Al^{26} decay scheme, James M. Ferguson—1238
α decay of deformed even-even nuclei, R. R. Chasman and J. O. Rasmussen—512
β-γ correlation and time reversal invariance, Icko Iben, Jr.—1240
Ca^{39} decay, O. C. Kistner and B. M. Rustad—1972
Cu^{67} decay, J. W. Butler and C. R. Gossett—1257
Directional correlation of γ rays in Ge^{72}, R. G. Arns and M. L. Wiedenbeck—229
Energy levels of F^{18}, D. F. Herring—1217
Excited states of Cu^{64} and Cu^{66}, R. P. de Figueiredo, M. Mazari, and W. W. Buechner—873
Excited states of V^{51} and Cr^{53}, M. Mazari, W. W. Buechner, and A. Sperduto—1692
Five new isomers with half-lives between 10^{-6} and 10^{-1} second, Robert B. Duffield and Stanley H. Vegors, Jr.—1958
4+ excited state in Os^{188}, P. S. Fisher and R. A. Naumann—1717
γ radiation from $Al^{27}+p$ and $F^{19}+p$, W. A. Ranken, T. W. Bonner, R. Castillo-Bahena, M. V. Harlow, Jr., and T. A. Rabson—239
Gd^{159} decay, S. S. Malik, N. Nath, and C. E. Mandeville—262
High-resolution electron spectroscopic study of 60-hr electron-capturing isomer Re^{182}, C. J. Gallagher, Jr., and J. O. Rasmussen—1730
Inner β spectra of Ag^{111} and Rb^{86}, R. L. Robinson and L. M. Langer—481
Internal conversion electrons from Coulomb excitation of Ta^{181}, E. M. Bernstein—2026
Isomers in Tb^{158} and Ho^{163}, N. B. Gove, R. W. Henry, L. T. Dillman, and R. A. Becker—489
Levels in Cr^{50}, Cr^{52}, Cr^{53}, and Cr^{54}, W. C. Porter, D. M. Van Patter, M. A. Rothman, and C. E. Mandeville—468
Lifetimes of first excited states of F^{17} and B^{10}, R. E. Holland, Frank J. Lynch, and S. S. Hanna—903
Measurements on longitudinal polarization of β rays from P^{32}, Y^{90}, Pr^{144}, Au^{198}, and Bi^{210} (RaE), J. S. Geiger, G. T. Ewan, R. L. Graham, and D. R. MacKenzie—1684
Measurements on v/c-dependence of β-circularly polarized γ correlation in Co^{60} using magnetic-lens spectrometer, L. A. Page, B.-G. Pettersson, and T. Lindqvist—893
New Ge isotope, Ge^{65}, Norbert T. Porile—1954
$N^{15}(p,n)O^{15}$ reaction study, K. W. Jones, L. J. Lidofsky, and J. L. Weil—1252
Nuclear spin-electron-neutrino correlation in forbidden β decay, Adam M. Bincer—244
Positron spectra of Eu^{152} and Eu^{152m}, D. E. Alburger, S. Ofer, and M. Goldhaber—1998

Nuclear Spectra (Continued)
Precision determination of nuclear energy levels in heavy elements, E. L. Chupp, J. W. M. DuMond, F. J. Gordon, R. C. Jopson, and Hans Mark—518
Radiations of Os^{193} and Os^{191}, V. S. Dubey, S. S. Malik, C. E. Mandeville, and Ambuj Mukerji—2139(E)
Recoil effect in β decay and K capture, Claude C. Bouchiat—877
Search for electric monopole pairs from 3.82-Mev state of Ca^{48}, K. E. Eklund and R. D. Bent—966
Search for electric monopole pairs from 7.6-Mev state of C^{12}, T. H. Kruse and R. D. Bent—931
Search for $0^- \rightarrow 0^+$ pair transition in O^{16}, K. E. Eklund and R. D. Bent—488
Shape of Pr^{143} β spectrum, J. H. Hamilton, L. M. Langer, R. L. Robinson, and W. G. Smith—945
Small deviations observed in β spectra: In^{114}, Y^{90}, and P^{32}, O. E. Johnson, R. G. Johnson, and L. M. Langer—2004; Na^{22}, J. H. Hamilton, L. M. Langer, and W. G. Smith—2010
Studies of decay schemes in Os-Ir region. I. Isomers Os^{190m} (10 min) and Os^{189m}(5.7 hr), G. Scharff-Goldhaber, D. E. Alburger, G. Harbottle, and M. McKeown—2139(E)
Test of nature of vector interaction in β-decay, Murray Gell-Mann—2139(E)
Two new promethium isotopes; cross sections of some Sm isotopes for 14.8-Mev neutrons, R. G. Wille and R. W. Fink—1950
Vector interaction in β decay, Jeremy Bernstein and Robert R. Lewis—232
Xe^{127} radiations, R. N. Forrest and H. T. Easterday—950
Nuclear Structure Theory (see also **Nuclear Reactions; Nuclear Spectra**)
α decay of deformed even-even nuclei, R. R. Chasman and J. O. Rasmussen—512
Application of perturbation methods to theory of nuclear matter, D. J. Thouless—906
Coulomb exchange energy from shell-model wave functions, N. V. V. J. Swamy and A. E. S. Green—1719
Energies of ground and excited nuclear configurations in first $p_{1/2}$ region, I. Unna and I. Talmi—452
First excited state of B^{11} and spin-flip stripping, J. E. Bowcock—923
Generalized reaction matrix approach to theory of infinite medium of fermions, Richard Prange and Abraham Klein—1008
Inelastic scattering from light nuclei—α-particle model for Be^9, J. S. Blair and E. M. Henley—2029
Perturbation theory for infinite medium of fermions, Abraham Klein and Richard Prange—994
Structure of nuclear mass surface, George A. Baker—954

Optical Instruments (see **Methods and Instruments**)
Optical Properties (see also **Luminescence**)
Absorption spectrum of KCl:Tl at low temperatures, David A. Patterson—296
Fundamental absorption edge in CdS, David Dutton—785
Fundamental optical absorption in MgO, Gilbert H. Reiling Eugene B. Hensley—1106
Infrared absorption by conduction electrons in Ge. Effects due to intravalley lattice-scattering, H. J. G. Meyer—298
Infrared and optical masers, A. L. Schawlow and C. H. Townes—1940
Internal photoeffect and exciton diffusion in Cd and Zn sulfides, M. Balkanski and R. D. Waldron—123
Inversion symmetry of M and R centers, A. W. Overhauser and H. Rüchardt—722
Optical absorption and photoconductivity in MgO crystals, W. T. Peria—423
Optical properties of alkali halides containing hydroxyl ions, H. W. Etzel and D. A. Patterson—1112
Photoemissive, photoconductive, and optical absorption studies of alkali-antimony compounds, W. E. Spicer—114
Radiation-induced changes of dimensions, index of refraction, and dispersion of LiF, William Primak—1075
Radiative recombination in Ge, Patricia H. Brill and Ruth F. Schwarz—330
Some low-temperature properties of R, M, and N centers in KCl and NaCl, W. Dale Compton and Clifford C. Klick—1620

Pair Production (see **Electrons and Positrons**)
Parity (see **Elementary Particle Interactions; Field Theory; Nuclear Spectra**)
Phosphors and Phosphorescence (see **Luminescence; Semiconductors**)
Photoconductivity (see **Electrical Conductivity and Resistance**)
Photodisintegration (see **Nuclear Photoeffects**)
Photoelasticity (see **Elasticity and Plasticity**)
Photoelectric Effect (see **Electrical Properties**)
Photography and Photographic Emulsions (see **Methods and Instruments; Optical Properties**)
Photometry (see **Methods and Instruments; Optical Properties**)
Photons (see **Radiation**)
Photovoltaic Effect (see **Electrical Properties; Semiconductors**)
Piezoelectric Effect (see **Dielectrics and Dielectric Properties**)
Plasma (see **Crystalline State; Electrical Conductivity and Resistance; Electrical Discharges; Fluid Dynamics; Statistical Mechanics and Thermodynamics**)
Plasticity (see **Elasticity and Plasticity**)
Polarization, Electrical (see **Dielectrics and Dielectric Properties**)
Polymers (see **Molecular Aggregates**)
Positronium (see **Atomic Structure and Spectra; Electrons and Positrons**)
Positrons (see **Electrons and Positrons**)
Probability (see **Mathematical Methods**)
Protons (see **Elementary Particle Interactions**)

Quantum Electrodynamics (see also **Field Theory**)
Consistency of quantum electrodynamics, Kenneth A. Johnson—1367
Effects of electric dipole moment of electron on H energy levels, G. Feinberg—1637
Gauge-invariant quantum electrodynamics, Irwin Goldberg—1361
High-energy bremsstrahlung in electron-proton collisions, R. A. Berg and C. N. Lindner—2072
New techniques in Lamb shift calculation, H. M. Fried and D. R. Yennie—1391
Radiative corrections to muon and neutron decay, S. M. Berman—267
Some atomic effects of electronic dipole moment, E. E. Salpeter—1642
Wide-angle pair production and quantum electrodynamics at small distances, J. D. Bjorken, S. D. Drell, and S. C. Frautschi—1409
Quantum Mechanics
Ground state of two-electron atoms, C. L. Pekeris—1649
Theory of radiative damping in stationary states, C. A. Mead—1843
Quenching of Radiation (see **Radiation**)

Radar (see **Methods and Instruments; Radiation**)

Radiation (see also **Gamma Rays; Range and Energy Loss; X-Rays**)
Elastic scattering of 1.6-Mev γ rays from H, Li, C, and Al nuclei, Luis W. Alvarez, Frank S. Crawford, Jr., and M. Lynn Stevenson—1267
Evaluation of bremsstrahlung cross sections at high-frequency limit, U. Fano, H. W. Koch, and J. W. Motz—1679
High-energy bremsstrahlung in electron-proton collisions, R. A. Berg and C. N. Lindner—2072
Polarization near high-frequency limit of 500-kev bremsstrahlung, J. W. Motz and R. C. Placious—1039
Theory of radiative damping in stationary states, C. A. Mead—1843

Radio Waves (see **Radiation**)
Radioactivity (see also **Nuclear Spectra**)
Low-temperature influence on Tc^{99m} lifetime, Don H. Byers and Robert Stump—77
New Ge isotope, Ge^{65}, Norbert T. Porile—1954
Recoil effect in β decay and K capture, Claude C. Bouchiat—877
Two new promethium isotopes; cross sections of some Sm isotopes for 14.8-Mev neutrons, R. G. Wille and R. W. Fink—1950
Raman Spectra (see **Molecular Structure and Spectra**)
Range and Energy Loss (see also **Scattering**)
Collision cross section and energy loss of slow electrons in H_2, G. Bekefi and Sanborn C. Brown—159
Energy loss per ion pair for protons in various gases, H. V. Larson—1927
Experimental range of protons in Al, Hans Bichsel—1089
Temperature dependence of characteristic energy loss of electrons in Al, Lewis B. Leder and L. Marton—341
Tight-binding corrections of stopping powers, Werner Brandt—1624
Recombination (see **Molecular Structure and Spectra**)
Rectifiers (see **Electrical Conductivity and Resistance; Semiconductors**)
Relativity and Gravitation
Conservation laws in general relativity as generators of coordinate transformations, Peter G. Bergmann—287
General relativity and particle dynamics, L. H. Thomas—2129
Klein-Gordon and Dirac equations in general relativity, Joseph Callaway—290
Relativity in stationary spherical or elliptic space, John Kronsbein—1385
Space-time structure of static spherically symmetric scalar field, H. Treder—2127
Structure of particles in linearized gravitational theory, R. Sachs and P. G. Bergmann—674
Superpotentials for generally covariant field theory, James L. Anderson—1826
Resistance, Electrical (see **Electrical Conductivity and Resistance**)
Resonance Radiation (see **Radiation**)

Scattering, General (see also **Diffraction; Elementary Particle Interactions; Nuclear Reactions; Range and Energy Loss**)
Dispersion relation for nonrelativistic potential scattering, Benjamin W. Lee—2122
Elastic scattering of C^{12} from Au, E. Goldberg and H. L. Reynolds—1981
Inelastic scattering from light nuclei—α-particle model for Be^9, J. S. Blair and E. M. Henley—2029
Influence of mass ratio on displacement cascades in diatomic solids, E. M. Baroody—1571
Minimum theorem for interaction radius in two-body collisions, William Rarita and Philip Schwed—271
Nitrogen-nitrogen elastic scattering, Charles E. Porter—1722
Proposal for determining pion-nucleon coupling constant from angular distribution for nucleon-nucleon scattering, Geoffrey F. Chew—1380
Variational methods for scattering problems, Marius Kolsrud—1436
Scattering of α Particles (see also **Nuclear Reactions Induced by α Particles and He^3**)
Energy levels of F^{18}, D. F. Herring—1217
$N^{14}(\alpha,\alpha)N^{14}$ and $N^{14}(\alpha,p)O^{17}$ differential cross sections, D. F. Herring, Ren Chiba, B. R. Gasten, and H. T. Richards—1210
Scattering of 18.7-Mev α particles from Al, Cu, and Ag, O. H. Gailar, E. Bleuler, and D. J. Tendam—1989
Scattering of He^3 from He^4 and states in Be^7, Philip D. Miller and G. C. Phillips—2048
Scattering of Atoms and Molecules (see **Atomic and Molecular Beams**)
Scattering of Deuterons and Tritons (see also **Nuclear Reactions Induced by Deuterons and Tritons**)
Scattering of Electrons and Positrons (see also **Electrons and Positrons**)
Collision cross section and energy loss of slow electrons in H_2, G. Bekefi and Sanborn C. Brown—159
Collisions of electrons with H atoms. I. Ionization, Wade L. Fite and R. T. Brackman—1141; II. Excitation of Lyman-α radiation, Wade L. Fite and R. T. Brackmann—1151; III. Elastic scattering, R. T. Brackmann, Wade L. Fite, and Roy H. Neynaber—1157
Dissociation of H_2 molecule ion by electron impact, Eugene V. Ivash—155
Electron-deuteron scattering by impulse approximation, A. Goldberg—618
Electron scattering from deuteron and neutron-proton potential, John A. McIntyre and George R. Burleson—2077
High-energy bremsstrahlung in electron-proton collisions, R. A. Berg and C. N. Lindner—2072
High-energy electron scattering from Li^6, George R. Burleson and R. Hofstadter—1282
Measurement of atomic and molecular excitation by trapped-electron method, G. J. Schulz—150
Sum rules for inelastic electron scattering, S. D. Drell and C. L. Schwartz—568
Scattering of Mesons and Hyperons (see also **Mesons and Hyperons; Nuclear Reactions Induced by Mesons and Hyperons**)
Discrepancy between π^--proton scattering and dispersion equation, Howard J. Schnitzer and George Salzman—1802
Dispersion relations for pion-proton scattering, D. A. Geffen—1370
Electromagnetic effects in meson-nucleon scattering, R. A. Sorensen—1813
π^+-p interactions in energy range around 500 Mev, M. E. Blevins, M. M. Block, and J. Leitner—1287
Pion-hyperon scattering and K^--p reactions, Marc Ross—986
Quasi-elastic scattering of pions by nuclei, T. K. Fowler—1325
Scattering of 80-Mev π^- mesons by complex nuclei, W. F. Baker, J. Rainwater, and R. E. Williams—1763
Scattering of polarized μ mesons from extended nuclei, George H. Rawitscher—1274
Scattering of 31.5-Mev positive pions from carbon, P. P. Kane—1337

Scattering of Mesons and Hyperons (Continued)
Theoretical calculations of scattering of π^- mesons by complex nuclei, W. F. Baker, H. Byfield, and J. Rainwater—1773
Scattering of Neutrons (see also **Nuclear Reactions Induced by Neutrons**)
Compound nucleus processes for reaction $U^{235}+n$, E. K. Rae, B. Margolis, and E. S. Troubetzkoy—492
Neutron nonelastic cross-section measurements on carbon, M. H. MacGregor and Rex Booth—486
Neutron scattering at 2.2 Mev by time of flight, H. H. Landon, A. J. Elwyn, G. N. Glasoe, and S. Oleksa—1192
Scattering of low-energy neutrons by deuterons, L. Sartori and S. I. Rubinow—214
Scattering of Protons (see also **Nuclear Reactions Induced by Protons**)
Angular distributions of elastically and inelastically scattered protons from In, R. D. Sharp and W. W. Buechner—897
Antiproton-proton cross sections at 133, 197, 265, and 333 Mev, Charles A. Coombes, Bruce Cork, William Galbraith, Glen R. Lambertson, and William A. Wenzel—1303
Charge exchange in proton-H-atom collisions, Wade L. Fite, R. Theodore Brackmann, and William R. Snow—1161
Effect of complex spin-orbit coupling on polarization of protons elastically scattered from nuclei, R. M. Sternheimer—1785
Elastic and inelastic scattering of protons by N^{14}, J. W. Olness, J. Vorona, and H. W. Lewis—475
Energy loss per ion pair for protons in various gases, H. V. Larson—1927
Measurements of interaction of 95-Mev protons with He^4, W. Selove and J. M. Teem—1658
Multiple scattering of protons, Hans Bichsel—182
Scattering of protons from He and level parameters in Li^5, Philip D. Miller and G. C. Phillips—2043
Tight-binding corrections of stopping powers, Werner Brandt—1624
Scattering of Radiation (see **Gamma Rays; Radiation; X-Rays**)
Scintillation Counters (see **Methods and Instruments**)
Secondary Emission (see **Electrical Properties**)
Semiconductors
Decay of excess carriers in semiconductors, K. C. Nomura and J. S. Blakemore—1607
Free-carrier absorption in n-type Ge, R. Rosenberg and Melvin Lax—843
Hall mobility of carriers in impure nondegenerate semiconductors, M. S. Sodha and P. C. Eastman—44
High-vacuum studies of surface recombination velocity for Ge, H. H. Madden and H. E. Farnsworth—793
Infrared absorption by conduction electrons in Ge, H. J. G. Meyer—298
Low-temperature heat capacity of pure and reduced rutile, P. H. Keesom and N. Pearlman—800
Magnetoresistance in n-type Ge at low temperatures, R. A. Laff and H. Y. Fan—317
Magnetoresistance in PbS, PbSe, and PbTe at 295°, 77.4°, and 4.2°K, Robert S. Allgaier—828
Mechanism of formation of donor states in heat-treated Si, W. Kaiser, H. L. Frisch, and H. Reiss—1546
Photoconduction and surface effects with ZnO crystals, R. J. Collins and D. G. Thomas—388
Piezoresistance in n-type GaAs, A. Sagar—1533
Radiative recombination in Ge, Patricia H. Brill and Ruth F. Schwarz—330
Role of traps in photoelectromagnetic and photoconductive effects, R. N. Zitter—852
Semiconductor surface potential and surface states from field-induced changes in surface recombination, George C. Dousmanis—369
Surface effects in electron-irradiated Ge at 80°K, Walter E. Spear—362
Surface transport theory, Jay N. Zemel—762
Shock Waves (see **Fluid Dynamics**)
Solid State (see **Crystalline State**)
Solutions (see **Liquids**)
Sound (see **Acoustics**)
Spallation (see **Nuclear Reactions**)
Spark Discharge (see **Electrical Discharges**)
Specific Heat (see **Thermal Properties**)
Spectra, Atomic (see **Atomic Structure and Spectra**)
Spectra, General
Electron spin resonance of atomic and molecular free radicals trapped at liquid He temperature, C. K. Jen, S. N. Foner, E. L. Cochran, and V. A. Bowers—1169
Frequency shift of zero-field hyperfine splitting of Cs^{133} produced by various buffer gases, M. Arditi and T. R. Carver—449
General impact theory of pressure broadening, Michel Baranger—855
Narrow hyperfine absorption lines for Cs^{133} in various buffer gases, E. C. Beaty, P. L. Bender, and A. R. Chi—450
Spectra, Molecular (see **Molecular Structure and Spectra**)
Spectra, Nuclear (see **Nuclear Spectra**)
Spectroscopy Technique (see **Methods and Instruments**)
Spinor Fields (see **Field Theory**)
Standards (see **Constants, Standards, Units**)
Stark Effect (see **Atomic Structure and Spectra**)
Statistical Mechanics and Thermodynamics
Approach of one-dimensional systems to equilibrium, Joseph Ford—1445
Approach to equilibrium, Ben A. Green, Jr.—1053
Generalized reaction matrix approach to theory of infinite medium of fermions, Richard Prange and Abraham Klein—1008
Low-temperature behavior of dilute Bose system of hard spheres. I. Equilibrium properties, T. D. Lee and C. N. Yang—1419
Perturbation theory for infinite medium of fermions, Abraham Klein and Richard Prange—994
Quantum theory of surface energy and tension, R. Brout and M. Nauenberg—1451
Statistical-mechanical theory of transport in fluids, Hazime Mori—1829
Statistical mechanics of coupled bosons in Heisenberg representation, Robert H. Kraichnan—1054
Statistical mechanics of coupled particles in Schrödinger representation, Robert H. Kraichnan—1056
Transport equation in quantum gases, Hazime Mori and John Ross—2139(E)
Statistical Methods (see **Mathematical Methods**)
Strange Particles (see **Elementary Particle Interactions; Mesons and Hyperons**)
Superconductivity
Critical-field measurements on superconducting Pb isotopes, D. L. Decker, D. E. Mapother, and R. W. Shaw—1888
Effects of pressure on superconducting transition temperatures of Sn, In, Ta, Tl, and Hg, L. D. Jennings and C. A. Swenson—31
Isotope effect on superconducting transition in Pb, R. R. Hake, D. E. Mapother, and D. L. Decker—1522
Low-temperature influence on Tc^{99m} lifetime, Don H. Byers and Robert Stump—77
Magnetization curves of superconductive Sn alloys, E. A. Lynton and B. Serin—70

Random-phase approximation in theory of superconductivity, P. W. Anderson—1900
Specific heat of Ga and Zn in normal and superconducting states, G. Seidel and P. H. Keesom—1083
Superconductivity and ferromagnetism in isomorphous compounds, B. T. Matthias, E. Corenzwit, and W. H. Zachariasen—89
Supersonics (see **Fluid Dynamics**)

Thermal Conductivity (see **Thermal Properties**)
Thermal Diffusion (see **Diffusion**)
Thermal Expansion (see **Thermal Properties**)
Thermal Properties
Dielectric and thermal study of $(NH_4)_2SO_4$ and $(NH_4)_2BeF_4$ transitions, S. Hoshino, K. Vedam, Y. Okaya, and R. Pepinsky—405
Low-temperature heat capacity of pure and reduced rutile, P. H. Keesom and N. Pearlman—800
Specific heat of face-centered cubic Mn-Fe alloy at liquid He temperatures, Chuan-Tseng Wei, Chin-Huan Cheng, and Paul A. Beck—696
Specific heat of Ga and Zn in normal and superconducting states, G. Seidel and P. H. Keesom—1083
Specific heat of LiF and KI at low temperatures, William W. Scales—49
Theory of solid Ne, A, Kr, and Xe at 0°K, Newton Bernardes—1534
Thermal conductivity of electron gas in gaseous plasma, T. Sekiguchi and R. C. Herndon—1
Thermal conductivity of Se at low temperatures, G. K. White, S. B. Woods, and M. T. Elford—111
Thermal expansion of some crystals with diamond structure, D. F. Gibbons—136; 2139(E)
Thermal Radiation (see **Radiation**)
Thermionic Emission (see **Electrical Properties**)
Thermodynamics (see **Statistical Mechanics and Thermodynamics**)
Thermoelectric Effect (see **Electrical Properties; Semiconductors**)
Thermoluminescence (see **Luminescence**)
Thermomagnetic Effect (see **Magnetic Properties**)
Total Cross Sections (see **Electrons and Positrons; Nuclear Reactions**)
Transmutation (see **Nuclear Reactions**)

Uncertainty Principle (see **Quantum Mechanics**)
Units (see **Constants, Standards, Units**)

Vacuum Tubes (see **Methods and Instruments**)
Van der Waals Forces (see **Molecular Structure and Spectra**)
Viscosity (see **Liquids**)

Wave Mechanics (see **Quantum Mechanics**)
Work Function (see **Electrical Properties**)

X-Rays
K series x-ray wavelengths in rare earth elements, E. L. Chupp, J. W. M. DuMond, F. J. Gordon, R. C. Jopson, and Hans Mark—1183

AUTHOR INDEX TO VOLUME 1

References with (E) are to Errata. The notation "et al." designates authors, other than the first, of Letters having more than one author.

ABASHIAN, A. and E. M. HAFNER. Experimental test of time-reversal invariance in strong interactions 255

ABRAGAM, A. and J. M. WINTER. Proposal for a source of polarized protons 374

ACCARDO, CARL A. Beryllium-7 extreme high-temperature experiment 180

AGARWAL, SOM PRAKASH, et al. Further observations on nature of the current reduction in the primary cosmic ray intensity 107; 183(E)

—— et al. Nature of the current reduction in the primary cosmic-ray intensity 65

AGNEW, LEWIS E., JR., TOM ELIOFF, WILLIAM B. FOWLER, LOUIS GILLY, RICHARD LANDER, LARRY OSWALD, WILSON M. POWELL, EMILIO SEGRÈ, HERBERT M. STEINER, HOWARD S. WHITE, CLYDE WIEGAND, and TOM YPSILANTIS. Elastic scattering of antiprotons on carbon at 30 to 200 Mev 27

ALLEN, J. S., et al. Determination of the Gamow-Teller beta-decay interaction from the decay of helium-6 61

ALMQVIST, E., et al. F^{18} levels near 1 Mev 260

—— et al. Gamma-ray branching and some spin and parity assignments in B^{11} 414

—— et al. Neutron threshold measurements using the Chalk River tandem Van de Graaff accelerator 251

ALTMAN, A. and W. M. MacDONALD. Relativistic corrections to the Fermi matrix element 456

ANDERSON, GERALD S. and SAM LEGVOLD. Conduction electron-magnetic ion interaction in rare earths 322

ANDERSON, K. A. Ionizing radiation associated with solar radio noise storm 335

ANDERSON, L. WILMER, FRANCIS M. PIPKIN, and JAMES C. BAIRD, JR. Optical polarization of atomic hydrogen 229

APPLE, E. F., et al. Radiative energy transfer in ZnS 134

ARNOLD, G. P., et al. Energy vs momentum relation for the excitations in liquid helium 9

ATKINS, K. R., et al. Coefficient of thermal expansion of liquid He^3 near 0°K 315

AUER, PETER L. Vlasov instability in longitudinal plasma oscillations 411

AXENSTEN, S., et al. Nuclear ground-state spins of thallium 198 and 201 473

BAIRD, JAMES C. JR., et al. Optical polarization of atomic hydrogen 229

BALDO-CEOLIN, M., et al. Anti-lambda hyperon 179

BARANGER, ELIZABETH and SYDNEY MESHKOV. Configuration mixing in the C^{14} ground state 30; 119(E)

BARDEEN, JOHN. Two-fluid model of superconductivity 399

BARNES, C. A., W. A. FOWLER, H. B. GREENSTEIN, C. C. LAURITSEN, and M. E. Nordberg. Nature of the Li^8 beta-decay interaction 328

—— et al. Angular correlation of alpha particles from decay of Li^8 326

BARNES, R. G. and R. A. HULTSCH. Indirect nuclear spin-spin interactions in pure quadrupole resonance spectra 227

BARSHAY, SAUL. Determination of the parities of strange particles from dispersion relations 177; 263(E)

——. K meson-nucleon interactions and the relative Σ-Λ parity 97

BASTIDE, R. P., et al. Neutron threshold measurements using the Chalk River tandem Van de Graaff accelerator 251

BATTERMAN, BORIS W. Effect of chemical impurities on x-ray integrated intensities in nearly perfect germanium 228

BEATY, E. C., et al. Optical detection of narrow Rb^{87} hyperfine absorption lines 311

BECKER, R. L., et al. Polarization of conversion electrons following β decay 116

BEHRNDT, M. E., et al. Observation of microwave cyclotron resonance by cross modulation 59

BENDER, P. L., E. C. BEATY, and A. R. CHI. Optical detection of narrow Rb^{87} hyperfine absorption lines 311

—— et al. Proton gyromagnetic ratio 413

BENDT, P. J., et al. Energy vs momentum relation for the excitations in liquid helium 9
BERLEY, D., R. L. GARWIN, G. GIDAL, and L. M. LEDERMAN. Electric dipole moment of the muon 144; 263(E)
BERMAN, S. M. Radiative corrections to pion beta decay 468
BIENLEIN, H., et al. Polarization of RaE electrons 460
BINCER, A., E. CHURCH, and J. WENESER. Shape and polarization of the beta spectrum of radium E 95
BISI, A. and L. ZAPPA. Circular polarization of external bremsstrahlung 332
BLAND, G. F., et al. New experimental test of special relativity 342
BLOOM, STEWART D., et al. Circular polarization of A^{37} internal bremsstrahlung 34; 79(E)
BOEHM, F., VOLKER SOERGEL, and BERTHOLD STECH. Higher-order effects in the allowed beta decay of F^{20} 77
BOLDT, ELIHU, HERBERT S. BRIDGE, DAVID O. CALDWELL, and YASH PAL. Helicity of the proton from Λ^0 decay 256
——, DAVID O. CALDWELL, and YASH PAL. Λ^0, θ_1^0, θ_2^0, and $\overline{\theta}^0$ lifetimes 148
——, DAVID O. CALDWELL, and YASH PAL. θ_1^0-θ_2^0 mass difference 150
BOLLINGER, L. M., et al. Gamma-ray spectra from neutron capture in resonances of Mn^{55} 76
BÖMMEL, H. E. and K. DRANSFELD. Excitation of very-high-frequency sound in quartz 234
BONFIGLIOLI, G., P. BROVETTO, and C. CORTESE. *F* and *V* centers thermoluminescent recombination 94; 263(E)
BOWEN, THEODORE, JUDSON HARDY, JR., GEORGE T. REYNOLDS, GUIDO TAGLIAFERRI, ALBERT E. WERBROUCK, and WILLIAM H. MOORE. Observation of unpolarized Λ's produced by 1.5-Bev π^- interactions in Pb, Fe, and C 11
BOWERS, K. D., et al. Microwave spin echoes from donor electrons in silicon 368
BOWERS, V. A., et al. Electron spin resonance spectra of the NH_2 and ND_2 free radicals at 4.2°K 91
BOWLES, K. L. Observation of vertical-incidence scatter from the ionosphere at 41 Mc/sec 454
BOZORTH, R. M. Origin of weak ferromagnetism in rare-earth orthoferrites 362
——, VIVIAN KRAMER, and J. P. REMEIKA. Magnetization in single crystals of some rare-earth orthoferrites 3
BRAID, T. H., et al. Determination of the Gamow-Teller beta-decay interaction from the decay of helium-6 61
BRAY, P. J., et al. Li^7 and F^{19} nuclear magnetic resonances in neutron-irradiated LiF 453
BREIT, G. Effects of atomic electrons on p-p and n-p scattering 200
BREMER, JOHN W. and V. L. NEWHOUSE. Thermal propagation effect in thin superconducting films 282
BRIDGE, HERBERT S., et al. Helicity of the proton from Λ^0 decay 256
BROMLEY, D. A., et al. F^{18} levels near 1 Mev 260
—— et al. Gamma-ray branching and some spin and parity assignments in B^{11} 414
—— et al. Neutron threshold measurements using the Chalk River tandem Van de Graaff accelerator 251
BROOKS, N., et al. Neutron threshold measurements using the Chalk River tandem Van de Graaff accelerator 251
BROVETTO, P., et al. *F* and *V* centers thermoluminescent recombination 94; 263(E)
BRUECKNER, K. A. and K. R. ATKINS. Coefficient of thermal expansion of liquid He^3 near 0°K 315
BRYAN, R. A., J. J. de SWART, R. E. MARSHAK, and P. S. SIGNELL. Semiphenomenological theory of Σ^+ hyperon-proton scattering up to 150 Mev 70
BÜCK, P., et al. Quadrupole moment of Ne^{21} 214
BÜHRING, WOLFGANG and JOACHIM HEINTZE. Electron polarization in the β decay of RaE 176
BUNEMAN, O. Instability, turbulence, and conductivity in current-carrying plasma 8; 119(E)
BURGMAN, J. O., J. FISCHER, B. LEONTIC, A. LUNDBY, R. MEUNIER, J. P. STROOT, and J. D. TEJA. Muon *K*-capture compared to β decay for C^{12}—B^{12} 469
BURGY, M. T., V. E. KROHN, T. B. NOVEY, G. R. RINGO, and V. L. TELEGDI. Test of time-reversal invariance of the beta interaction in the decay of free polarized neutrons 324

BURMAN, R. L., et al. Determination of the Gamow-Teller beta-decay interaction from the decay of helium-6 61
BUSH, WILLIAM B., et al. Magnetic field effects on bow shock stand-off distance 58

CALDWELL, DAVID O., et al. Λ^0, θ_1^0, θ_2^0, and $\overline{\theta}^0$ lifetimes 148
—— et al. θ_1^0-θ_2^0 mass difference 150
—— et al. Helicity of the proton from Λ^0 decay 256
CALL, R. L., et al. Search for mass-550 particles 203
CARLSON, R. O., et al. Spin of Fe^{57} 295
CARPENTER, R. T., et al. Gamma-ray spectra from neutron capture in resonances of Mn^{55} 76
CEDARHOLM, J. P., G. F. BLAND, B. L. HAVENS, and C. H. TOWNES. New experimental test of special relativity 342
CHAMPNESS, C. H. Interpretation of the transverse magnetoresistance in p-type indium antimonide at liquid nitrogen temperature 439
CHESNE, A., et al. Discovery of a new mendelevium isotope 215
CHI, A. R., et al. Optical detection of narrow Rb^{87} hyperfine absorption lines 311
CHILDS, W. J., L. S. GOODMAN, and L. J. KIEFFER. Spin and magnetic dipole moment of 2.6-hr Mn^{56} 296
CHIU, H.-Y. and J. HAMILTON. π^- scattering and dispersion relations 146
CHRIEN, R. E., et al. Strength functions for deformed nuclei 461
CHURCH, E., et al. Shape and polarization of the beta spectrum of radium E 95
CLARK, M. A., J. M. ROBSON, and R. NATHANS. Investigation of time-reversal invariance in the β decay of the neutron 100
COCHRAN, E. L., et al. Electron spin resonance spectra of the NH_2 and ND_2 free radicals at 4.2°K 91
COHEN, E. RICHARD and JESSE W. M. DuMOND. Changes in the 1955 atomic constants occasioned by revision of μ_e/μ_0 291; 382 (E)
COLE, H. and E. KINEKE. Lattice vibrational spectra of Si and Ge 360
COLEGROVE, F. D., et al. Alignment of metastable helium atoms by unpolarized resonance radiation 316
COMMINS, E. D. and P. KUSCH. Upper limit to the magnetic moment of He^6 208
CONNOR, R. J., et al. Neutron threshold measurements using the Chalk River tandem Van de Graaff accelerator 251
COOK, L. F. JR., and N. WILLIAMS, JR. Polarization effects in cascade showers 262
CORENZWIT, E., et al. Ferromagnetic superconductors 449
——, et al. Spin exchange in superconductors 92; 152(E)
CORRIGAN, J. J., S. F. SINGER, and M. J. SWETNICK. Cosmic-ray increases produced by small solar flares 104
CORTELLESSA, G., et al. Photoproduction of K mesons 109; 263(E)
CORTESE, C., et al. F and V centers thermoluminescent recombination 94; 263(E)
CRAWFORD, FRANK S., JR., MARCELLO CRESTI, MYRON L. GOOD, GEORGE R. KALBFLEISCH, M. LYNN STEVENSON, and HAROLD K. TICHO. Beta decay of the Λ 377
——, MARCELLO CRESTI, MYRON L. GOOD, FRANK T. SOLMITZ, and M. LYNN STEVENSON. Search for parity nonconservation in the associated production process 209
CRESTI, MARCELLO, et al. Beta decay of the Λ 377
—— et al. Search for parity nonconservation in the associated production process 209

DASH, WILLIAM C. Generation of prismatic dislocation loops in silicon crystals 400
DeSORBO, WARREN. Energy released on annealing quenched-in defects in gold 238
DESSLER, A. J. Large-amplitude hydromagnetic waves above the ionosphere 68
de SWART, J. J., et al. Semiphenomenological theory of Σ^+ hyperon-proton scattering up to 150 Mev 70
DITCHFIELD, C. R. and P. A. FORRESTER. Maser action in the region of 60°K 448
DIXON, F. P. and R. L. WALKER. Photoproduction of single positive pions from hydrogen in the 500-1000 Mev region 142
——, and R. L. WALKER. Photoproduction of single positive pions from hydrogen in the 600- to 1000-Mev region 458
DONAHUE, T. M. Determination of upper atmosphere sodium abundance from D_2/D_1 measurements in twilight 287

DORAN, D. G., G. R. FOWLES, and G. A. PETERSON. Shock-wave compression of aluminum 402
DOUSMANIS, GEORGE C. Proposal for detection of negative-mass carriers by cyclotron resonance 55
——, R. C. DUNCAN, JR., J. J. THOMAS, and R. C. WILLIAMS. Experimental evidence for carriers with negative mass 404
DRANSFELD, K., et al. Excitation of very-high-frequency sound in quartz 234
DRISCOLL, R. L. and P. L. BENDER. Proton gyromagnetic ratio 413
DuMOND, JESSE W. M., et al. Changes in the 1955 atomic constants occasioned by revision of μ_e/μ_0 291; 382(E)
DUNCAN, R. C., JR., et al. Experimental evidence for carriers with negative mass 404

EKSPONG, A. G. and S. NILSSON. Protonic Σ-decay with an associated electron pair 36
ELIOFF, TOM , et al. Elastic scattering of antiprotons on carbon at 30 to 200 Mev 27
ELMORE, W. C., E. M. LITTLE, and W. E. QUINN. Neutrons of possible thermonuclear origin 32
ESSEN, L., et al. Frequency of cesium in terms of ephemeris time 105

FAZZINI, T., G. FIDECARO, A. W. MERRISON, H. PAUL, and A. V. TOLLESTRUP. Electron decay of the pion 247
FELD, B. T. and B. C. MAGLIĆ. Asymmetry in scattering of 150-Mev polarized protons in nuclear emulsions 375
FERGUSON, A. J., H. E. GOVE, J. A. KUEHNER, A. E. LITHERLAND, E. ALMQVIST, and D. A. BROMLEY. Gamma-ray branching and some spin and parity assignments in B^{11} 414
—— et al. Neutron threshold measurements using the Chalk River tandem Van de Graaff accelerator 251
FERRELL, RICHARD A. Rigorous validity criterion for testing approximations to the electron gas correlation energy 443
FIDECARO, G., et al. Electron decay of the pion 247
FINK, R. W., et al. New isotope of beryllium 23
FISCHER, J., et al. Muon K-capture compared to β decay for C^{12}—B^{12} 469
FISHER, M. E., et al. Susceptibility of the Ising model of an antiferromagnet 321
FJELSTADT, PAUL, et al. Broken atomic beam resonance experiment 232
FLIPPEN, R. B., et al. Piezoelectric effect in indium antimonide 233
FONER, S. N., E. L. COCHRAN, V. A. BOWERS, and C. K. JEN. Electron spin resonance spectra of the NH_2 and ND_2 free radicals at 4.2°K 91
FORBUSH, S. E., et al. Correlation of cosmic ray intensity and solar activity 173
FORRESTER, P. A., et al. Maser action in the region of 60°K 448
FOWLER, T. K. Optical model of inelastic scattering 371; 420(E)
FOWLER, W. A., et al. Angular correlation of alpha particles from decay of Li^8 326
—— et al. Nature of the Li^8 beta-decay interaction 328
FOWLER, WILLIAM B., et al. Elastic scattering of antiprotons on carbon at 30 to 200 Mev 27
FOWLES, G. R., et al. Shock-wave compression of aluminum 402
FRANKEN, P. A. and R. D. COLEGROVE. Alignment of metastable helium atoms by unpolarized resonance radiation 316
FRANKEN, P., R. SANDS, and J. HOBART. Polarization of free potassium atoms by exchange collisions with sodium atoms and free electrons 52; 118(E)
FRANTZ, LEE M., ROBERT L. MILLS, ROGER G. NEWTON, and ANDREW M. SESSLER. Exclusion principle and phenomenological optical-model potentials 340
FREDEN, S. C., F. C. GILBERT, and R. S. WHITE. Decay of a negative τ' meson 217
FRIEDMAN, LEWIS. Experimental limit of the neutrino rest mass 101
FRYE, GLENN M., JR. Antiproton annihilation into neutral pions 14
FUJII, SHIN'ICHI, et al. Ferroelectricity in $NaNO_2$ 320
FULLER, E. G. and EVANS HAYWARD. Elastic scattering of photons by tantalum 465

GALSTER, S. and H. SCHOPPER. Circular polarization of external bremsstrahlung produced by beta rays 330
GARVIN, HUGH L., THOMAS M. GREEN, and EDGAR LIPWORTH. Nuclear spin of 12.6-hr iodine-130 292

——, T. M. GREEN, E. LIPWORTH, and W. A. NIERENBERG. Level inversion in the hyperfine structure of bromine-76. Nuclear moments of bromine-76 293
——, T. M. GREEN, E. LIPWORTH, and W. A. NIERENBERG. Nuclear spin of astatine-211 74
GARWIN, R. L., et al. Electric dipole moment of the muon 144; 263(E)
GASIOROWICZ, S. and A. PETERMANN. Electromagnetic mass correction for spin 0 particles 457
GATTI, R., et al. Discovery of a new mendelevium isotope 215
GHIORSO, A., T. SIKKELAND, J. R. WALTON, and G. T. SEABORG. Attempts to confirm the existence of the 10-minute isotope of 102 17
——, T. SIKKELAND, J. R. WALTON, and G. T. SEABORG. Element No. 102 18
GIDAL, G., et al. Electric dipole moment of the muon 144; 263(E)
GILBERT, F. C., et al. Decay of a negative τ' meson 217
GILLY, LOUIS., et al. Elastic scattering of antiprotons on carbon at 30 to 200 Mev 27
GOEBEL, C. Determination of the π-π interaction strength from π-N scattering 337
GOLDHABER, M. Doubling of fermions? 377
GOOD, MYRON L., et al. Beta decay of the Λ
—— et al. Search for parity nonconservation in the associated production process 209
GOODMAN, L. S., et al. Spin and magnetic dipole moment of 2.6-hr Mn^{56} 296
GORDON, J. P. and K. D. BOWERS. Microwave spin echoes from donor electrons in silicon 368
GOVE, H. E., J. A. KUEHNER, A. E. LITHERLAND, E. ALMQVIST, D. A. BROMLEY, A. J. FERGUSON, P. H. ROSE, R. P. BASTIDE, N. BROOKS, and R. J. CONNOR. Neutron threshold measurements using the Chalk River tandem Van de Graaff accelerator 251
—— et al. Gamma-ray branching and some spin and parity assignments in B^{11} 414
GREEN, M. S. Bose-Einstein condensation and the λ-transition in liquid helium 409
GREEN, T. M., et al. Level inversion in the hyperfine structure of bromine-76. Nuclear moments of bromine-76 293
—— et al. Nuclear spin of astatine-211 74
—— et al. Nuclear spin of 12.6-hr iodine-130 292
GREENSTEIN, H. B., et al. Nature of the Li^8 beta-decay interaction 328
GROSOF, G. M., P. BUCK, W. LICHTEN, and I. I. RABI. Quadrupole moment of Ne^{21} 214
GÜRSEY, FEZA. Possible connection between strangeness and parity 98
GUTOWSKY, H. S., and D. E. WOESSNER. Spin lattice relaxation resonances in solids 6
HAFNER, E. M., et al. Experimental test of time-reversal invariance in strong interactions 255
HALL, R. GLENN, et al. Frequency of cesium in terms of ephemeris time 105
HALL, THOMAS C., et al. Surface mobility in germanium and silicon 276
HALSTED, R. E., E. F. APPLE, and J. S. PRENER. Radiative energy transfer in ZnS 134
HAMBURGER, A. I., et al. Angular distributions of tritons from the $C^{14}(d,t)C^{13}$ reaction 29; 119(E)
HAMILTON, J., et al. π^- Scattering and dispersion relations 146
HARDY, JUDSON, JR., et al. Observation of unpolarized Λ's produced by 1.5-Bev π^- interactions in Pb, Fe, and C 11
HARRISON, MICHAEL J. Magnetic field dependence of ultrasonic attenuation 442
HASEGAWA, HIROSHI, et al. Theory of galvanomagnetic effect at high magnetic field 279
HASHITSUME, NATSUKI, et al. Theory of galvanomagnetic effect at high magnetic field 279
HAVENS, B. L., et al. New experimental test of special relativity 342
HAWKINS, T. D. H., et al. Low-level absorption in germanium 129
HAYWARD, EVANS, et al. Elastic scattering of photons by tantalum 465
HEINTZE, JOACHIM, et al. Electron polarization in the β decay of RaE 176
HENSHAW, D. G. Energy-momentum relation in liquid helium by inelastic scattering of neutrons 127
HERRMANNSFELDT, W. B., R. L. BURMAN, P. STÄHELIN, J. S. ALLEN, and T. H. BRAID. Determination of the Gamow-Teller beta-decay interaction from the decay of helium-6 61
HIGGS, PETER W. Integration of secondary constraints in quantized general relativity 373
HOBART, J., et al. Polarization of free potassium atoms by exchange collisions with sodium atoms and free electrons 52; 118(E)

HOFMANN, F. W., et al. Cyclotron resonance in flames 408
HOLLANDER, LEWIS E., JR. Piezoresistivity in reduced single-crystal rutile (TiO_2) 370
HOLLOWAY, W. W., JR. and R. NOVICK. Determination of the hyperfine structure of atomic nitrogen by optical orientation 367
HONIG, A. and E. STUPP. Electron spin-lattice relaxation in phosphorus-doped silicon 275
HORNIG, A. W., R. C. REMPEL, and H. E. WEAVER. Interpretation of electron paramagnetic resonance in $BaTiO_3$ 284
HROSTOWSKI, HENRY J. and R. H. KAISER. Infrared spectra of heat treatment centers in silicon 199
HUGHES, D. J., R. L. ZIMMERMAN, and R. E. CHRIEN. Strength functions for deformed nuclei 461
HULDT, LENNART and TORSTEN STAFLIN. Infrared absorption of photogenerated free carriers in germanium 236
——. Valence band structure of silicon 313
HULTSCH, R. A., et al. Indirect nuclear spin-spin interactions in pure quadrupole resonance spectra 227

IGO, GEORGE. Optical model potential at the nuclear surface for the elastic scattering of alpha particles 72
IMPEDUGLIA, G., R. PLANO, A. PRODELL, N. SAMIOS, M. SCHWARTZ, and J. STEINBERGER. β decay of the pion 249
ISSENDORFF, H. v., et al. Polarization of RaE electrons 460

JEN, C. K., et al. Electron spin resonance spectra of the NH_2 and ND_2 free radicals at 4.2°K 91
JOHANSSON, C. M., et al. Nuclear ground-state spins of thallium 198 and 201 473
JOHNSON, W. B. Observations on the plasma produced in a magnetic mirror geometry 333

KAISER, R. H., et al. Infrared spectra of heat treatment centers in silicon 199
KAISER, W., et al. Optical properties of crystalline boron 230; 382(E)
KALBFLEISCH, GEORGE R., et al. Beta decay of the Λ 377
KENNETT, T. J., L. M. BOLLINGER, and R. T. CARPENTER. Gamma-ray spectra from neutron capture in resonances of Mn^{55} 76
KENNEY, ROBERT W., et al. Photoproduction of positive pions from protons 12
KERR, E. C., et al. Energy vs momentum relation for the excitations in liquid helium 9
KEUFFEL, J. W., R. L. CALL, W. H. SANDMANN, and M. O. LARSON. Search for mass-550 particles 203
KIEFFER, L. J., et al. Spin and magnetic dipole moment of 2.6-hr Mn^{56} 296
KINEKE, E., et al. Lattice vibrational spectra of Si and Ge 360
KITTEL, C. Paramagnetic centers as detectors of ultrasonic radiation at microwave frequencies 5
KLEPPNER, DANIEL, NORMAN F. RAMSEY, and PAUL FJELSTADT. Broken atomic beam resonance experiment 232
KNAPP, EDWARD A., et al. Photoproduction of positive pions from protons 12
KOTANI, TSUNEYUKI and MARC ROSS. Simple approximation for the nonunique first forbidden transitions 140
KRAMER, VIVIAN, et al. Magnetization in single crystals of some rare-earth orthoferrites 3
KROHN, V. E., et al. Test of time-reversal invariance of the beta interaction in the decay of free polarized neutrons 324
KUBO, RYOGO, HIROSHI HASEGAWA, and NATSUKI HASHITSUME. Theory of galvanomagnetic effect at high magnetic field 279
KUEHNER, J. A., E. ALMQVIST, and D. A. BROMLEY. F^{18} levels near 1 Mev 260
—— et al. Gamma-ray branching and some spin and parity assignments in B^{11} 414
—— et al. Neutron threshold measurements using the Chalk River tandem Van de Graaff accelerator 251
KUSCH, P., et al. Upper limit to the magnetic moment of He^6 208

LAMPERT, MURRAY A. Mobile and immobile effective-mass-particle complexes in nonmetallic solids 450
LANDER, RICHARD., et al. Elastic scattering of antiprotons on carbon at 30 to 200 Mev 27

LANDOVITZ, L. and B. MARGOLIS. Nucleon spectrum in strong-coupling theory 206
LARSON, M. O., et al. Search for mass-550 particles 203
LAURITSEN, C. C., et al. Angular correlation of alpha particles from decay of Li^8 326
—— et al. Nature of the Li^8 beta-decay interaction 328
LAURITSEN, T., C. A. BARNES, W. A. FOWLER, and C. C. LAURITSEN. Angular correlation of alpha particles from decay of Li^8 326
LAUTERBUR, PAUL C., et al. Anisotropy of the C^{13} chemical shift in calcite 343
LAX, MELVIN. Optical properties of diamond type crystals 131
——. Quadrupole interactions and the vibration spectra of diamond type crystals 133
LeCRAW, R. C., et al. Magnetoacoustic resonance in yttrium iron garnet 241
LEDERMAN, L. M., et al. Electric dipole moment of the muon 144; 263(E)
LEGVOLD, SAM, et al. Conduction electron-magnetic ion interaction in rare earths 322
LEONTIC, B., et al. Muon K-capture compared to β decay for C^{12}—B^{12} 469
LEVINE, ARNOLD D. Multiple meson production in electron-proton collisions 111
LICHTEN, W., et al. Quadrupole moment of Ne^{21} 214
LINDGREN, I., C. M. JOHANSSON, and S. AXENSTEN. Nuclear ground-state spins of thallium 198 and 201 473
LIPWORTH, E., et al. Level inversion in the hyperfine structure of bromine-76. Nuclear moments of bromine-76 293
—— et al. Nuclear spin of 12.6-hr iodine-130 292
—— et al. Nuclear spin of astatine-211 74
LITHERLAND, A. E., et al. Gamma-ray branching and some spin and parity assignments in B^{11} 414
—— et al. Neutron threshold measurements using the Chalk River tandem Van de Graaff accelerator 251
LITTLE, E. M., et al. Neutrons of possible thermonuclear origin 32
LORD, NORMAN W. Electron-nuclear double resonance of F centers in lithium fluoride 170
LOW, W. and D. SHALTIEL. Electron paramagnetic resonance in $BaTiO_3$ 286
——, and D. SHALTIEL. Electron spin resonance in single crystals 51
LUDWIG, G. W., H. H. WOODBURY, and R. O. CARLSON. Spin of Fe^{57} 295
—— et al. Spin of Ni^{61} 16
LUNDBY, A., et al. Muon K-capture compared to β decay for C^{12}—B^{12} 469
LUNDY, R. A., J. C. SENS, R. A. SWANSON, V. L. TELEGDI, and D. D. YOVANOVITCH. Experimental evidence for the influence of atomic binding on the decay rate of negative muons 102; 263(E)
——, J. C. SENS, R. A. SWANSON, V. L. TELEGDI, and D. D. YOVANOVITCH. Precise measurements of muon magnetic moments by "stroboscopic coincidences" 38
LYNCH, GERALD, J. OREAR, and S. ROSENDORFF. Measurement of the asymmetry parameter in μ-e decay 471
MacDONALD, W. M., et al. Relativistic corrections to the Fermi matrix element 456
MAGLIĆ, B. C., et al. Asymmetry in scattering of 150-Mev polarized protons in nuclear emulsions 375
MANN, LLOYD G., JOHN A. MISKEL, and STEWART D. BLOOM. Circular polarization of A^{37} internal bremsstrahlung 34; 79(E)
MANNING, JOHN R. Correlation correction to the activation energy for diffusion in crystalline solids 365
MARGOLIS, B., et al. Nucleon spectrum in strong-coupling theory 206
MARKOWITZ, W., R. GLENN HALL, L. ESSEN, and J. V. L. PARRY. Frequency of cesium in terms of ephemeris time 105
MARSHAK, R. E., et al. Divergenceless currents and K-meson decay 25; 119(E)
—— et al. Range of the spin-orbit force between two protons 416
—— et al. Semiphenomenological theory of Σ^+ hyperon-proton scattering up to 150 Mev 70
MARTIN, DOUGLAS L. Thermal effects of the martensitic transition in sodium 4
——. Thermal effects of the martensitic transition in lithium 447
MATTHIAS, B. T., H. SUHL, and E. CORENZWIT. Ferromagnetic superconductors 449

——, H. SUHL, and E. CORENZWIT. Spin exchange in superconductors 92; 152(E)
—— et al. Diamagnetic nuclear magnetic resonance shifts in alloys 278
McDANIEL, B. D., A. SILVERMAN, R. R. WILSON, and G. CORTELLESSA. Photoproduction of K mesons 109; 263(E)
McGRUER, J. N., et al. Angular distributions of tritons from the $C^{14}(d,t)C^{13}$ reaction 29; 119(E)
MERRISON, A. W., et al. Electron decay of the pion 247
MESHKOV, SYDNEY, et al. Configuration mixing in the C^{14} ground state 30; 119(E)
MEUNIER, R., et al. Muon K-capture compared to β decay for C^{12}—B^{12} 469
MILLEA, MICHAEL F. and THOMAS C. HALL. Surface mobility in germanium and silicon 276
MILLS, ROBERT L., et al. Exclusion principle and phenomenological optical-model potentials 340
MISKEL, JOHN A., et al. Circular polarization of A^{37} internal bremsstrahlung 34; 79(E)
MOON, P. B., G. G. SHUTE, and B. S. SOOD. Electron-capture energy and level lifetime by temperature effect in Sm^{152} gamma-ray resonance 21
MOORE, W. E., J. N. McGRUER, and A. I. HAMBURGER. Angular distributions of tritons from the $C^{14}(d,t)C^{13}$ reaction 29; 119(E)
MOORE, WILLIAM H., et al. Observation of unpolarized Λ's produced by 1.5-Bev π^- interactions in Pb, Fe, and C 11
MOREL, PIERRE. Evaluation of the contribution of the umklapp-processes to the electron-phonon interaction 244
MORITA, M. Beta-neutrino-alpha directional correlation 112
MOSS, T. S. and T. D. H. HAWKINS. Low-level absorption in germanium 129
MOSZKOWSKI, S. A. and B. L. SCOTT. Proposed boundary condition potential for the two-nucleon problem 298
MUGA, L., et al. Discovery of a new mendelevium isotop 215
NATHANS, R., et al. Investigation of time-reversal invariance in the β decay of the neutron 100
NEHER, H. V. and S. E. FORBUSH. Correlation of cosmic ray intensity and solar activity 173
NEWHOUSE, V. L., et al. Thermal propagation effect in thin superconducting films 282
NEWMAN, R., et al. Thermal conductivity of MnO and NiO 359
NEWTON, J. O. and F. S. STEPHENS. Experimental observation of double Coulomb excitation 63
NEWTON, ROGER G., et al. Exclusion principle and phenomenological optical-model potentials 340
NIERENBERG, W. A., et al. Level inversion in the hyperfine structure of bromine-76. Nuclear moments of bromine-76 293
—— et al. Nuclear spin of astatine-211 74
NILSSON, S., et al. Protonic Σ-decay with an associated electron pair 36
NOMURA, SHOICHIRO, et al. Ferroelectricity in $NaNO_2$ 320
NORDBERG, M. E., et al. Nature of the Li^8 beta-decay interaction 328
NORDIN, PAUL, JAY OREAR, LEONARD REED, ARTHUR H. ROSENFELD, FRANK T. SOLMITZ, HORACE D. TAFT, and ROBERT D. TRIPP. Leptonic decays of hyperons 380
NOVEY, T. B., et al. Test of time-reversal invariance of the beta interaction in the decay of free polarized neutrons 324
NOVICK, R. and H. E. PETERS. Orientation of rubidium atoms by spin exchange with optically pumped sodium atoms 54; 152(E)
—— et al. Determination of the hyperfine structure of atomic nitrogen by optical orientation 367
NURMIA, M. J. and R. W. FINK. New isotope of beryllium 23
O'KEEFE, J. G., et al. Li^7 and F^{19} nuclear magnetic resonances in neutron-irradiated LiF 453
OKUBO, S., et al. Divergenceless currents and K-meson decay 25; 119(E)
OREAR, JAY, et al. Leptonic decays of hyperons 380
—— et al. Measurement of the asymmetry parameter in μ-e decay 471
OSWALD, LARRY , et al. Elastic scattering of antiprotons on carbon at 30 to 200 Mev 27

PAIS, A. Parity and other symmetries in strong interactions 418
PAL, YASH, et al. Helicity of the proton from Λ^0 decay 256
—— et al. Λ^0, θ_1^0, θ_2^0, and $\bar{\theta}^0$ lifetimes 148
—— et al. θ_1^0-θ_2^0 mass difference 150
PARRY, J. V. L., et al. Frequency of cesium in terms of ephemeris time 105
PAUL, H., et al. Electron decay of the pion 247
PEIERLS, RONALD F. Photopion cross sections and a second resonance 174
PEREZ-MENDEZ, VICTOR, et al. Photoproduction of positive pions from protons 12
PETERMANN, A., et al. Electromagnetic mass correction for spin 0 particles 457
PETERS, H. E., et al. Orientation of rubidium atoms by spin exchange with optically pumped sodium atoms 54; 152(E)
PETERSON, G. A., et al. Shock-wave compression of aluminum 402
PETERSON, L. and J. R. WINCKLER. Short γ-ray burst from a solar flare 205
PHILLIPS, L., R. GATTI, A. CHESNE, L. MUGA, and S. THOMPSON. Discovery of a new mendelevium isotope 215
PHILLIPS, NORMAN E. Heat capacity of superconducting zinc 363
PINES, D. and J. R. SCHRIEFFER. Theory of the Meissner effect 407
PIPKIN, FRANCIS M., et al. Optical polarization of atomic hydrogen 229
PLANO, R., et al. β decay of the pion 249
POMERANTZ, MARTIN A. and SOM PRAKASH AGARWAL. Further observations on the nature of the current reduction in the primary cosmic-ray intensity 107; 183(E)
——, S. P. AGARWAL, and V. R. POTNIS. Nature of the current reduction in the primary cosmic-ray intensity 65
POTNIS, V. R., et al. Nature of the current reduction in the primary cosmic-ray intensity 65
POWELL, WILSON M., et al. Elastic scattering of antiprotons on carbon at 30 to 200 Mev 27
PRENER, J. S., et al. Radiative energy transfer in ZnS 134
PRICE, O. R., D. H. STORK, and H. K. TICHO. K^+ meson-nucleon scattering phase shift analysis 212
PRODELL, A., et al. β decay of the pion 249
PROWSE, D. J. and M. BALDO-CEOLIN. Anti-lambda hyperon 179
QUINN, W. E., et al. Neutrons of possible thermonuclear origin 32
RABI, I. I., et al. Quadrupole moment of Ne^{21} 214
RAMSEY, NORMAN F., et al. Broken atomic beam resonance experiment 232
RAUCH, C. J., et al. Observation of microwave cyclotron resonance by cross modulation 59
REDMOND, PETER J. and JACK L. URETSKY. Conjecture concerning the properties of nonrenormalizable field theories 147
REED, LEONARD, et al. Leptonic decays of hyperons 380
REMEIKA, J. P., et al. Magnetization in single crystals of some rare-earth orthoferrites 3
REMPEL, R. C., et al. Interpretation of electron paramagnetic resonance in $BaTiO_3$ 284
RENEKER, D. H. New oscillatory absorption of ultrasonic waves in bismuth in a magnetic field 440
REYNOLDS, GEORGE T., et al. Observation of unpolarized Λ's produced by 1.5-Bev π^- interactions in Pb, Fe, and C 11
RICHARDS, P. L. and M. TINKHAM. Far infrared energy gap measurements in bulk superconductors 318
RICHTER, BURTON. Large-angle electron pair production from hydrogen 114
RING, P. J., J. G. O'KEEFE, and P. J. BRAY. Li^7 and F^{19} nuclear magnetic resonances in neutron-irradiated LiF 453
RINGO, G. R., et al. Test of time-reversal invariance of the beta interaction in the decay of free polarized neutrons 324
ROBSON, J. M., et al. Investigation of time-reversal invariance in the β decay of the neutron 100
ROLFE, J. Hydroxide absorption band in alkali halide crystals 56
ROSE, M. E. and R. L. BECKER. Polarization of conversion electrons following β-decay 116
ROSE, P. H., et al. Neutron threshold measurements using the Chalk River tandem Van de Graaff accelerator 251
ROSENDORFF, S., et al. Measurement of the asymmetry parameter in μ-e decay 471

ROSENFELD, ARTHUR H., et al. Leptonic decays of hyperons 380
ROSENZWEIG, NORBERT. Spacings of nuclear energy levels 24
ROSS, MARC, et al. Simple approximation for the nonunique first forbidden transitions 140

SAKURAI, J. J. Rest mass of the neutrino 40
——. Wilson-Peierls ambiguity in high-energy photoproduction 258
SAMIOS, N., et al. β decay of the pion 249
SANDMANN, W. H., et al. Search for mass-550 particles 203
SANDS, R., et al. Polarization of free potassium atoms by exchange collisions with sodium atoms and free electrons 52; 118(E)
SAWADA, SHOZO, SHOICHIRO NOMURA, SHIN'ICHI FUJII, and IKUSHI YOSHIDA. Ferroelectricity in $NaNO_2$ 320
SCHIFF, L. I. Sign of the gravitational mass of a positron 254
SCHMITT, ROMAN A. and RODMAN A. SHARP. Measurement of the range of recoil atoms 445
SCHNEIDER, JÜRGEN and F. W. HOFMANN. Cyclotron resonance in flames 408
SCHOEN, A. H. Correlation and the isotope effect for diffusion in crystalline solids 138; 184(E)
SCHOPPER, H., et al. Circular polarization of external bremsstrahlung produced by beta rays 330
SCHRIEFFER, J. R., et al. Theory of the Meissner effect 407
SCHWARTZ, M., et al. β decay of the pion 249
SCOTT, B. L., et al. Proposed boundary condition potential for the two-nucleon problem 298
SEABORG, G. T., et al. Attempts to confirm the existence of the 10-minute isotope of 102 17
—— et al. Element No. 102 18
SEAVEY, M. H., JR., and P. E. TANNENWALD. Direct observation of spin-wave resonance 168
SEGRÈ, EMILIO, et al. Elastic scattering of antiprotons on carbon at 30 to 200 Mev 27
SENITZKY, I. R. Behavior of a two-level solid-state maser 167
SENS, J. C., et al. Experimental evidence for the influence of atomic binding on the decay rate of negative muons 102; 263(E)
—— et al. Precise measurements of muon magnetic moments by "stroboscopic coincidences" 38
SESSLER, ANDREW M., et al. Exclusion principle and phenomenological optical-model potentials 340
SHALTIEL, D., et al. Electron paramagnetic resonance in $BaTiO_3$ 286
—— et al. Electron spin resonance in single crystals 51
SHARP, RODMAN A., et al. Measurement of the range of recoil atoms 445
SHIMAMOTO, Y. Symmetries in baryon-K meson interactions 463
SHULMAN, R. G., B. J. WYLUDA, and B. T. MATTHIAS. Diamagnetic nuclear magnetic resonance shifts in alloys 278
SHUTE, G. G., et al. Electron-capture energy and level lifetime by temperature effect in Sm^{152} gamma-ray resonance 21
SIGNELL, P. S., R. ZINN, and R. E. MARSHAK. Range of the spin-orbit force between two protons 416
—— et al. Semiphenomenological theory of Σ^+ hyperon-proton scattering up to 150 Mev 70
SIKKELAND, T., et al. Attempts to confirm the existence of the 10-minute isotope of 102 17
—— et al. Element No. 102 18
SILVERMAN, A., et al. Photoproduction of K mesons 109; 263(E)
SIMMS, P. C. and R. M. STEFFEN. β-γ angular correlation experiments and time-reversal invariance of the beta interaction 289
SINGER, S. F. "Radiation belt" and trapped cosmic-ray albedo 171
——. Trapped albedo theory of the radiation belt 181; 300(E)
—— et al. Cosmic-ray increases produced by small solar flares 104
SLACK, G. A. and R. NEWMAN. Thermal conductivity of MnO and NiO 359
SLEPIAN, JOSEPH. Inapplicability of certain hydromagnetic principles to the ionic centrifuge 287
SLIFKIN, L., et al. Diffusion along dislocations 243
SOERGEL, VOLKER, et al. Higher-order effects in the allowed beta decay of F^{20} 77
SOLMITZ, FRANK T., et al. Leptonic decays of hyperons 380

—— et al. Search for parity nonconservation in the associated production process 209
SOOD, B. S., et al. Electron-capture energy and level lifetime by temperature effect in Sm^{152} gamma-ray resonance 21
SPAEPEN, J. Density of neutron-irradiated lithium fluoride crystals 281
SPENCER, E. G. and R. C. LeCRAW. Magnetoacoustic resonance in yttrium iron garnet 241
SPIEWAK, M. Magnetic field dependence of high-frequency penetration into a superconductor 136
SPITZER, W. G. and W. KAISER. Optical properties of crystalline boron 230; 382(E)
STAFLIN, TORSTEN, et al. Infrared absorption of photo-generated free carriers in germanium 236
—— et al. Valence band structure of silicon 313
STAHELIN, P., et al. Determination of the Gamow-Teller beta-decay interaction from the decay of helium-6 61
STAPP, HENRY P. Structure of mesons 296
STECH, BERTHOLD, et al. Higher-order effects in the allowed beta decay of F^{20} 77
STEFFEN, R. M., et al. β-γ angular correlation experiments and time-reversal invariance of the beta interaction 289
STEIN, P. C. Search for a long-lived charged particle 21
STEINBERGER, J., et al. β decay of the pion 249
STEINER, HERBERT M., et al. Elastic scattering of antiprotons on carbon at 30 to 200 Mev 27
STEPHENS, F. S., et al. Experimental observation of double Coulomb excitation 63
STEVENSON, M. LYNN, et al. Beta decay of the Λ 377
—— et al. Search for parity nonconservation in the associated production process 209
STORK, D. H., et al. K^+ meson-nucleon scattering phase shift analysis 212
STROOT, J. P., et al. Muon K-capture compared to β decay for C^{12}—B^{12} 469
STUPP, E., et al. Electron spin-lattice relaxation in phosphorus-doped silicon 275
SUDARSHAN, E. C. G., et al. Divergenceless currents and K-meson decay 25; 119(E)
SUHL, H., et al. Ferromagnetic superconductors. 449
—— et al. Spin exchange in superconductors 92; 152(E)
SWANSON, R. A., et al. Experimental evidence for the influence of atomic binding on the decay rate of negative muons 102; 263(E)
—— et al. Precise measurements of muon magnetic moments by "stroboscopic coincidences" 38
SWETNICK, M. J., et al. Cosmic-ray increases produced by small solar flares 104
SYKES, M. F. and M. E. FISHER. Susceptibility of the Ising model of an antiferromagnet 321
TAFT, HORACE D., et al. Leptonic decays of hyperons 380
TAGLIAFERRI, GUIDO, et al. Observation of unpolarized Λ's produced by 1.5-Bev π^- interactions in Pb, Fe, and C 11
TANNENWALD, P. E., et al. Direct observation of spin-wave resonance 168
TEJA, J. D., et al. Muon K-capture compared to β decay for C^{12}—B^{12} 469
TELEGDI, V. L., et al. Experimental evidence for the influence of atomic binding on the decay rate of negative muons 102; 263(E)
—— et al. Precise measurements of muon magnetic moments by "stroboscopic coincidences" 38
—— et al. Test of time-reversal invariance of the beta interaction in the decay of free polarized neutrons 324
TEUTSCH, W. B., et al. Divergenceless currents and K-meson decay 25; 119(E)
THOMAS, J. J., et al. Experimental evidence for carriers with negative mass 404
THOMPSON, S., et al. Discovery of a new mendelevium isotope 215
TICHO, HAROLD K., et al. Beta decay of the Λ 377
—— et al. K^+ meson-nucleon scattering phase shift analysis 212
TINKHAM, M., et al. Far infrared energy gap measurements in bulk superconductors 318
TOLLESTRUP, A. V., et al. Electron decay of the pion 247
TOWNES, C. H., et al. New experimental test of special relativity 342
TRIPP, ROBERT D., et al. Leptonic decays of hyperons 380

URETSKY, JACK L., ROBERT W. KENNEY, EDWARD A. KNAPP, and VICTOR PEREZ-MENDEZ. Photoproduction of positive pions from protons 12
—— et al. Conjecture concerning the properties of nonrenormalizable field theories 147

WALKER, R. L., et al. Photoproduction of single positive pions from hydrogen in the 500-1000 Mev region 142
—— et al. Photoproduction of single positive pions from hydrogen in the 600- to 1000-Mev region 458
WALTON, J. R., et al. Attempts to confirm the existence of the 10-minute isotope of 102 17
—— et al. Element No. 102 18
WARBURTON, E. K. Gamma transitions in self-conjugate nuclei 68
WARNER, CHARLES, III. Strong interactions and associated production 246
WASILIK, J. H. and R. B. FLIPPEN. Piezoelectric effort in indium antimonide 233
WEAVER, H. E., et al. Interpretation of electron paramagnetic resonance in $BaTiO_3$ 284
WEGENER, H., H. BIENLEIN, and H. v. ISSENDORFF. Polarization of RaE electrons 460
WEINBERG, S., R. E. MARSHAK, S. OKUBO, E. C. G. SUDARSHAN, and W. B. TEUTSCH. Divergenceless currents and K-meson decay 25; 119(E)
WEISS, M. T. Microwave and low-frequency oscillation due to resonance instabilities in ferrites 239
WENESER, J., et al. Shape and polarization of the beta spectrum of radium E 95
WERBROUCK, ALBERT E., et al. Observation of unpolarized Λ's produced by 1.5-Bev π^- interactions in Pb, Fe, and C 11
WHITE, HOWARD S., et al. Elastic scattering of antiprotons on carbon at 30 to 200 Mev 27
WHITE, R. S., et al. Decay of a negative τ' meson 217
WIEGAND, CLYDE, et al. Elastic scattering of antiprotons on carbon at 30 to 200 Mev 27
WILLIAMS, G. P., JR., and L. SLIFKIN. Diffusion along dislocations 243
WILLIAMS, N., JR., et al. Polarization effects in cascade showers 262
WILLIAMS, R. C., et al. Experimental evidence for carriers with negative mass 404
WILSON, R. R., et al. Photoproduction of K mesons 109; 263(E)
WINCKLER, J. R., et al. Short γ-ray burst from a solar flare 205
WINTER, J. M., et al. Proposal for a source of polarized protons 374
WOESSNER, D. E., et al. Spin-lattice relaxation resonances in solids 6
WOODBURY, H. H. and G. W. LUDWIG. Spin of Ni^{61} 16
—— et al. Spin of Fe^{57} 295
WYLUDA, B. J., et al. Diamagnetic nuclear magnetic resonance shifts in alloys 278

YARNELL, J. L., G. P. ARNOLD, P. J. BENDT, and E. C. KERR. Energy vs momentum relation for the excitations in liquid helium 9
YOSHIDA, IKUSHI, et al. Ferroelectricity in $NaNO_2$ 320
YOVANOVITCH, D. D., et al. Experimental evidence for the influence of atomic binding on the decay rate of negative muons 102; 263(E)
—— et al. Precise measurements of muon magnetic moments by "stroboscopic coincidences" 38
YPSILANTIS, TOM, et al. Elastic scattering of antiprotons on carbon at 30 to 200 Mev 27

ZAPPA, L., et al. Circular polarization of external bremsstrahlung 332
ZEIGER, H. J., C. J. RAUCH, and M. E. BEHRNDT. Observation of microwave cyclotron resonance by cross modulation 59
ZIEMER, RICHARD W. and WILLIAM B. BUSH. Magnetic field effects on bow shock stand-off distance 58
ZIMMERMAN, R. L., et al. Strength functions for deformed nuclei
ZINN, R., et al. Range of the spin-orbit force between two protons 416